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Contents

EDITORIAL

International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE) is an open access international peer reviewed multidisciplinary journal that publishes professional, scientific and review papers in the field of humanities, pedagogical sciences, psychology, IT, mathematics and other sciences. Editorial Board strives to provide a possibility for the scientists of different fields to publish the results of their research, technical and theoretical studies. IJCRSEE is multidisciplinary in approach, and will publish a great range of papers: reports of qualitative case studies, quantitative experiments and surveys, mixed method studies, action researches, meta-analyses, discussions of conceptual and methodological issues, etc. IJCRSEE publisher is The Association for the Development of Science, Engineering and Education from Serbia and copublisher is College for Preschool Teachers, Aleksinac, Serbia.

The journal publishes articles in all areas of cognitive science, including studies of cognitive processes, emotions, perception, memory processes, thinking, problem solving, planning, training, studies of language and consciousness. The journal focuses on studies in the field of education, human performance and studies of fundamental cognitive skills in everyday life. The journal combines works in the field of psychology, artificial intelligence, linguistics, philosophy, computer science and neuroscience. The articles on the results of scientific research in various fields of cognitive science that concentrate on multidisciplinary audience are of top priority for the journal. The audience of our journal – is, in the first place, researchers in the field of cognitive science and related fields, including psychologists, educational researchers, anthropologists, philosophers, linguists, neuroscientists, programmers.

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The primary **aim** of IJCRSEE is to provide relevant scientific results for novice and expert scholars and to enable researchers to publish and share their work with the academe throughout the world. The aim of the journal is to promote and strengthen the quality of research in the field of science, engineering and education.

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- Cognitive Psychology
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- Cognitive Geography
- Cognitive Neurophysiology
- Cognitive Aspects of Biology, Physiology, Neurophysiology
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Writing – Please write in good English (American or British usage is accepted, but not a mixture of these). For non-native English speakers, and perhaps even for some native English speakers, grammar, spelling, usage, and punctuation of the texts are very important for an effective presentation. Hence, manuscripts are expected to be written in a clear, cogent, and readily understandable by an international readership.

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The submission has not been previously published or presented to another journal for consideration (or an explanation has been provided in Comments to the Editor).

The submission file is in OpenOffice, Microsoft Word, RTF, or WordPerfect document file format.

Where available, URLs for the references have been provided.

The text is single-spaced; uses a 12-point font; employs italics, rather than underlining (except with URL addresses); and all illustrations, figures, and tables are placed within the text at the appropriate points, rather than at the end.

The text adheres to the stylistic and bibliographic requirements outlined in the Author Guidelines, which can be found in the section *About the Journal*.

If submitting to a peer-reviewed section of the journal, the instructions in *Ensuring a Blind Review* have been followed.

A manuscript goes through the peer review process. Authors submit manuscripts to **Editorial office** via the online system. The acknowledgement letter should be sent to the author to confirm the receipt of the manuscript. The Chief Editor first reviews manuscripts. Chief Editor is assisted by Section Editors (could also be Co- or Associated Editors). The Editor assigns a Section Editor to see the manuscript through the complete review process and return it with a recommendation or decision. The manuscript is checked to see if it meets the scope of the Journal and its formal requirements. If it is incorrect or unsuitable, the author should be informed and the manuscript filed (or returned if requested) – direct rejection. Manuscripts that are not suitable for publication in the Journal are rejected. A Rejection letter is sent to the author stating the reason for rejection. If the manuscript conforms to the aims and scope of the Journal, and formally abides by the Instructions to Authors it is sent out for review. Depending on the type of paper, it could be accepted immediately for publication (invited Editorial, Book review etc) by the Chief Editor.

Check that the manuscript has been written and styled in accordance with the Journal style; that it carries an abstract (if applicable), keywords, correct reference system etc. and check that the correct blinding system has been used. If anything is missing ask the author to complete it before the manuscript is sent out for review.

The manuscript is sent out for review. The reviewer reads and evaluates the manuscript and eventually sends a review report to the Chief Editor. The time for review can be set to 2-6 weeks depending on the discipline (more time is usually given to papers in the humanities and social sciences). Make sure to provide the reviewer with clear instructions for the work, e.g. outlined in the form of a Review report or a number of questions to be considered.

Based on the reviewers' comments the Chief Editor makes a decision to:
- Accept the manuscript without further revision
- Accept after revision
- Ask authors to resubmit
- Reject

An acceptance letter is sent to the author and the final manuscript is forwarded to production. Sometimes, the authors are requested to revise in accordance with reviewers' comments and submit the updated version or their manuscript to the Chief Editor. The time for review can be set to 2-8 weeks depending on the discipline and type of additional data, information or argument required. The authors are requested to make substantial revisions to their manuscripts and resubmit for a new evaluation. A rejection letter is sent to the author and the manuscript is archived. Reviewers might be informed about the decision.

After review a manuscript goes to the Copy Editor who will correct the manuscript concerning the correct referencing system, confirmation with the journal style and layout. When Copy Editor finishes his/her work they send manuscripts to the Layout editor.

Layout Editor is responsible for structuring the original manuscript, including figures and tables, into an article, activating necessary links and preparing the manuscript in the various formats, in our case PDF and HTML format. When Layout Editor finishes his/her job they send manuscripts to Proof Editor.

Proof Editor confirms that the manuscript has gone through all the stages and can be published.

This issue has 8 articles (7 original research and 1 studies and article). Our future plan is to increase the number of quality research papers from all fields of science, engineering and

education. The editors seek to publish articles from a wide variety of academic disciplines and substantive fields; they are looking forward to substantial improvement of educational processes and outcomes.

We are delighted to announce that International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE) has passed an in depth review of CSAB team and they have advised that the title will be accepted for inclusion in **Scopus**.

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Editor in Chief
Dr. Lazar Stošić

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TECHNOLOGIES OF INITIATING STUDENTS INTO INDEPENDENT (SELF-GUIDED) ACTIVITY IN SUPPLEMENTARY DISTANCE LEARNING

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ARTICLE INFO

ABSTRACT

The research in question investigates the technologies of initiating independent activity within the framework of distance learning and their psychological aspects. The authors' classification of educational technologies of initiating students into independent cognitive activity is presented. Such technologies utilize various psychological mechanisms of exciting students' cognitive interest, intensifying cognitive processes, developing independent activity skills, and, as a result, increase motivation for independent activity and learning on the whole. These include such types of technologies as developmental technologies, interactive technologies, technologies of information transfer, technologies of meaning-making initiation. The research of the attitude of distance learning educators to independent activity of students and the content of the academic courses were done at Moodle-based education programs. The findings show the differences in retention rate among distance learning educators whose competence in terms of initiating students into independent (self-guided) activity varies. It's emphasized that interactive lectures, video-conferences, audio-visual aids, interactive seminars, glossaries, interactive tests are considered the most efficient technologies in initiating students into independent (self-guided) activity. The obtained results have made it possible to stress the developmental effect of distance learning technologies and the technologies of initiating students into independent (self-guided) activity in various psychic spheres of students: cognitive, individual, emotional. We mention the changes in motivational sphere of students and their meaning-making activity. In the course of correct development of distance learning we notice the development of voluntary and nonvoluntary cognitive activity. A student starts actively participating in educational process, he becomes the creator of his own world.

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1. INTRODUCTION

Globalization as well as integration of modern resources sets new objectives for educators and educational psychologists in the area of open and distance learning, namely, in the research into the ways of having students engaged in independent (self-guided) activity as well as designing and providing new education technologies (Belousova A., G. Kozhukhar, L. Ryumshina, 2015; Abakumova I. V., 2011; Anson W., 2004; Asmolov A. G., 1999).

A. G. Asmolov has described the methodological guidelines for the development of education in XXI century, such as switching to the system of variable innovative technologies, ethnic differentiation of learning, variable coursebooks, multifunctional means of education, information technologies etc. (As-

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molov A. G., 2014). Supplementary education is becoming the pivot of new educational environment, turning the creative activity of school students into a resource for social development (Abakumova I. V, Ermakov P. N., Fomenko V. T., 2013).

The general trend towards expanding education boundaries until the removal of cultural, technological, and language barriers between students and teachers who may well belong to differing national, cultural and continental communities, sets new professional standards for educators and education professionals. The very idea of distance and open learning implies being open and being able to have a realistic and rational view of life. Hence, one of the key aspects is personality of an educator and their readiness to innovate (Azarova E. A., Mozgovaja N. N., Novokhatko E. N., 2015; Bakaeva I. A., Vanzha L. N., 2015; Bakaeva I. A., 2015).

Another party to the process of learning is students as the subjects of open and distance learning, being even more active participants of the process than those in the traditional classroom learning environment. At the same time, we can detect some changes in the way Russian school students show their psychological, cognitive and emotional readiness for such learning. The system of values undergoes transformation, with somatic and will-power values coming to the foreground and social and altruistic values fading into the background. The result is decline in initiative and lack of self-motivation. This means education professionals need to design some new technologies of initiating students into independent (self-guided) activity in the course of open and distance learning (Bakaeva I. A., 2015; Anson W., 2004; Rjumshina, L. I., 2000; Belousova A., G. Kozhukhar, L. Ryumshina, 2015).

The technologies of initiating students into independent (self-guided) activity embrace those activities of educators and students in the course of learning which are designed to develop students' capacity for unaided study in compliance with the principles of developing cognitive independence. Such technologies employ a certain set of activities, namely distance learning technologies.

The technologies of initiating students into independent cognitive activity have been formulated by I. V. Abakumova, I. A. Bakaeva on the basis of psychological aspects of initiating independent activity within the framework of distance learning. Such technologies utilize various psychological mechanisms of exciting students' cognitive interest, intensifying cogni-

tive processes, developing independent activity skills, and, as a result, increase motivation for independent activity and learning on the whole (Table 1). These include such types of technologies as developmental technologies (technologies of working with texts, project technology, case-study); interactive technologies (corporate interaction, brainstorming, decision tree, simulation games, critical incident method, discussion); technologies of information transfer (technologies of audio-visual means of information delivery; working with textbooks); technologies of meaning-making initiation (creative-meaningful tasks, problem-based learning).

Table 1. Technologies of initiating students into independent (self-guided) activity in distance learning

№	Type of technology	Name of technology	Instruments\forms within the distance learning shell
1	Developmental	Working with texts technology	Taking notes when reading; annotated reading (INSERT); conceptual dictionary (glossary); drawing up a plan; essay; report
2		Project technology	Interactive seminar; Wiki – project; tasks for independent (self-guided) work
3		Case study	Tasks for independent (self-guided) work; chatroom; Wiki - portal
4	Interactive: Technologies of team and group interaction	Corporate interaction	Interactive seminar; chatroom; Wiki - portal
5		Brainstorming	Videoconference; webinar; online chat room
6		Decision tree	Videoconference; webinar; online chat room; interactive seminar; Wiki - portal
7	Interactive: Technologies of situation modeling	Simulation games	Custom-tailored games; real process models (interactive laboratories etc.)
8		Critical incidents method	Tasks for independent (self-guided) work; Assessment tasks – test materials
9	Interactive: Technologies of elaborating on debating points	Discussion	News forum; standard forum; informal discussion; standard blog-format discussion; Q&A forum; chat-room
10	Technologies of information delivery	Teaching through audiovisual means of information delivery	Presentations; digital textbook; hypertext on the Internet; illustrative video- and audio-materials; recorded audio-lectures; webinars
11		Teaching through textbooks	Digital textbook; hypertext documents; interactive lecture
12	Technologies of meaning-making initiation	Creative-meaningful tasks	Tasks for independent (self-guided) work; interactive seminar
13		Problem-based learning	Interactive lecture; interactive seminar; tasks for independent (self-guided) work

2. MATERIALS AND METHODS

Teachers and students of Rostov Oblast Regional Center of Distance Learning for Gifted Children (RORCDLGC) acted as respondents in the course of research into the technologies of independent (self-guided) activity initiation. The Center offers Moodle-based supplementary education programmes for students of Rostov Oblast comprehensive schools. The research included finding out teachers' attitude to the technologies of independent (self-guided) activity initiation by asking them to fill in a questionnaire. Fol-

lowing the completion of the questionnaire all the teachers were roughly divided into groups depending on the level of their competence (high and low) in employing the technologies of independent (self-guided) activity initiation. The content of distance learning courses designed by members of both groups was analyzed from the point of view of methods employed, and comparative analysis within both competence groups was carried out.

School students were offered a questionnaire in order to evaluate the motivational aspect of distant learning process (Bakaeva I. A., 2015). In this case the retention rate was an indicator of how efficiently teachers from both competence groups worked.

On the whole the number of educators\professionals who acted as respondents amounted to 52 members of RORCDLGC teaching staff, with 81% of faculty members (university professors), 19% of teachers from top comprehensive schools and other providers of supplementary education. All of the teaching staff (100%) have a university degree, among whom 68% are Candidates or Doctors of Science. The teaching staff are in the 27 to 71 age range, with the average age being 38. The length of teaching and research experience varies between 3 and 49 years, the average length of teaching experience being 15 years. The proportion of female to male respondents was 5/1, with 85% of women, and 15% of men.

In order to differentiate between distance learning teachers in terms of their efficiency and attitude to the technologies they use, we employed the questionnaire designed by I. V. Abakumova, I. A. Bakaeva which focuses on the way teachers treat independent (self-guided) cognitive activity of school students. The questionnaires were then processed by means of content-analysis method including the following units of analysis: cognitive, emotional (evaluative) and behavioral.

3. RESULTS

After polling survey of the teachers and subsequent content analysis two groups of teachers were distinguished: "competent" and "lacking in competence" in terms of the use of technologies of independent (self-guided) activity of students. Out of the 52 teaching staff, 27 members were categorized as "competent" ones, while 25 – as "lacking in competence" (Table 2).

Table 2. Groups of distance learning teachers set up according to the teachers' attitude to the technologies of independent (self-guided) activity initiation

Group	Group title	Group description	Number of respondents	Student retention rate
1	"Competent"	Competent, positive about and actively employing the technologies of independent (self-guided) activity initiation	27	24.5%
2	"Lacking in competence"	Lacking in competence, ambivalent about the technologies of independent (self-guided) activity initiation, using them on an ad hoc basis	25	16.4%

One of the practical tasks of research into the courses designed by distance learning teachers was to establish the student retention rate, as this is viewed as one of the most important issues in everyday practice of supplementary education. Statistical analysis has shown significant differences between the two groups in terms of student retention rate at p=0.01 (U = 135) (Table 2). The retention rate was higher for the "Competent" group with the average of 24.5%, while the average retention rate for the "Lacking in Competence" group was 16.4%.

Content analysis in terms of the methods adopted by distance learning teachers has made it possible to draw up a list of technologies employed and the relationship between these (Table 3).

The study of the course elements in both groups enables us to see some differences, as the teachers from the "Lacking in Competence" group had them in greater number – 175.33, with the average of 165.22.

"Interactive lectures" which are employed as a resource of developmental technologies, technologies of information transfer and interactive technologies, were used much more extensively by the "Competent" teachers (12.84%) than by the "Lacking in Competence" teachers (5.52%, with Z=0.548 at $\rho \leq 0.01$), although these elements are actually basic to the process of initiating students into independent (self-guided) activity.

"Hypertext" documents containing embedded links which can be used to navigate the document interactively, play both developmental and initiating role in learning, and were used more extensively by the "Competent" teachers (16%) than by the "Lacking in

Competence" teachers (12%, with Z=0.348 at ρ≤0.01).

The biggest share across the groups, 18%, was taken by videoconferences, with 11.6% in the "Lacking in Competence" group (Z = 0.395 at ρ≤0.01) and 10.7% in the "Competent" group. This fact indicates, that the "Lacking in Competence" teachers are much more geared to following the traditional "classroom period" system of teaching, in which the teacher plays the leading role, with the student being just an object of pedagogic effort. At the same time, polling both teachers and students enabled us to make a conclusion that a rationally balanced combination of videoconferences and independent (self-guided) activity results in most productive learning and development of students' cognitive motivation.

Such technologies of information delivery as video-materials are used on average by the "Competent" teachers at 15.82% of the course, whereas the average percentage of 12.86% of the course used by the "Lacking in Competence" group is significantly lower for the course in question (Z = 0.376 at ρ≤0.01).

Audio-materials are used on average by the teachers of both groups at 8% of the course, which is explained by the subject area taught, because it is the courses of foreign language and social studies that employ audio\video-materials and video-lectures most often.

The courses designed by distance learning teachers also utilize some elements of interactive technologies, namely – test materials. These are introduced as instrumentally developed standardized means of assessment which can be used both by a student at any convenient time and by a teacher whenever

the latter chooses to run a planned check on the students' progress within a strictly limited period. The "Competent" teachers' test materials make up 5.26% of the overall number of tasks, while the test materials employed by the "Lacking in competence" teachers make up 2.47% (Z = 0.413 at ρ≤0.01) of the overall number of tasks, which indicates a higher level of interactivity in the courses of the former group.

Some fairly significant differences were also perceived in the extent to which technologies of meaning-making initiation were represented, such as interactive seminar and glossary. These elements have a complex structure, and are produced cooperatively by teachers and students in a single creative effort, which brings about a new creative product resulting from the study of a unit or a module. According to statistical data, 8.5% of the "Competent" teachers' materials were represented in the form of interactive seminar, while the percentage of the same category of materials designed by the "Lacking in competence" teachers was only 2.57% (Z = 0.414 at ρ≤001). Content-analysis of this element of the course testifies to the fact that the latter is very labour-intensive and introducing it into the course requires taking a number of factors into account. However, there is no doubt that it has a strong meaning-making effect as well as impact on the students' cooperation.

Glossary as an element of the course was used in 7.05% of the "Competent" teachers' materials, whereas the percentage was 1.42% in the "Lacking in competence" teachers' materials (Z = 0.611 at ρ≤0.01).

Table 3. Analysis of the way educational technologies are represented in the courses designed by distance learning teachers

Group title	Number of units, modules	B/K, number	%	Chat-room, forum; number	%	Interactive lecture, number	%	Hypertext	%	Video	%	Audio	%	Test	%	Presentation	%	Seminar	%	Glossary	%
	Information Delivery Technologies																			Technologies of Meaning-Making Initiation	
	Interactive Technologies																	Interactive Technologies			
	Developmental Technologies																			Developmental Technologies	
Competent	37	17,88	10,7	4,529	2,87	20,28	**12,84**	22,5	16	25	**15,82**	12,5	7,9	8,31	**5,26**	12,8	8,1	**12,5**	8,5	**5,66**	7,05
Lacking in competence	41,92	20,41	11,6	7,5	4,29	9,66	5,52	21	10	22,5	12,86	13,75	9,86	4,33	2,47	12,66	9,01	4,5	2,57	2,.5	1,42
Total average	37,93	18,64	11,29	5,34	3,23	16,13	9,8	23,86	16,5	13,33	7,9	21	12	6,95	4,2	13,04	7,9	7,5	1,8	6,2	1,2

4. DISCUSSION

Theoretical and empirical analysis of the obtained results has made it possible to outline the basic psychological features of employing the technologies of independent (self-guided) activity initiation in distance learning:

1) Two groups of teachers are involved in the implementation of distance education: "competent" and "lacking in competence". "Competent" teachers demonstrated considerable knowledge of technologies of independent (self-guided) activity, knew their way around the issue in question, provided comprehensive explanatory statements on school students' independent (self-guided) activity, could enumerate the technologies used to initiate independent (self-guided) activity, shared their experience of employing such technologies, and, at the same time, had a positive attitude to these technologies and, moreover, practice the technologies of initiating independent (self-guided) activity in their everyday work. "Lacking in competence" teachers did not show enough competence in the theory of independent (self-guided) activity technologies, had an ambivalent attitude to employing these technologies and used them only on an ad hoc basis.

2) The level of competence of teachers in the use of technologies affects the level of formation of independent activity of students in distance education.

3) Technologies facilitate such functions as cognitive function, teaching function, communicative function, educational (instructional) function, regulatory function, cultural function, prestige (status) function, forecast function.

4) The developmental effect of distance learning technologies is brought about by individualized instruction and learning, closer cooperation with the teacher, enhanced efficiency in acquisition of knowledge, which becomes more personalized as a result (Kazakova T. V. Basalaeva N. V. Hramova L. N. Zaharova T. V. Jakovleva E. N., 2015).

5) The learning environment in distance education acts as a means of human memory and awareness enhancement, and, as it is, shapes the form in which individual awareness and memory exist. Internal processes are given outward expression, and vice versa. The very teaching-learning process is actually a pattern of intellectual activity on the whole, and this activity obviously structures intellectual functions and enables us to identify, objectivize and study them.

6) The research in question emphasizes the fact that distance learning technologies are viewed as active teaching aids which shape well-rounded personalities and perform a number of functions helping to form the child's picture of the world: cognitive function, teaching function, communicative function, educational (instructional) function, regulatory function, cultural function, prestige (status) function, forecast function. The process of distance learning, which on the surface looks "impersonal" and "formalized", possesses some deep structure with an enormous potential to develop students: to shape productive, creative thinking functions, to develop intellectual ability, to form operational thinking and personality motivation structure, to develop self-organization skills, to ensure personal development through character development.

7) Distance learning, due to independent (self-guided) work, brings about certain changes in the students themselves, with the ensuing enhanced interest in self-education, better diligence and single-mindedness, self-control and will-power. The introduction of technologies of independent (self-guided) activity initiation develops students' creativity due to the creative forms of this activity, implying "digesting" the material in a personalized way and creating a new product.
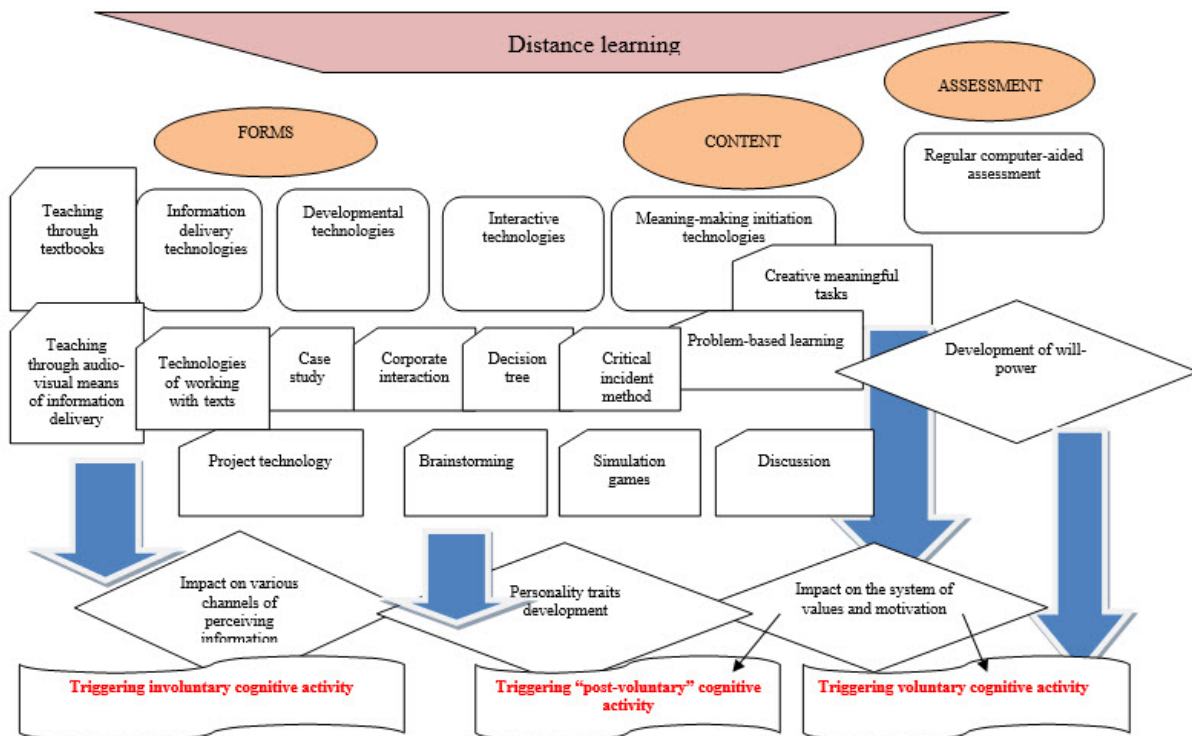
Figure 1. A chart outlining cognitive independence initiation in distance learning

5. CONCLUSION

1. Initiation of independent (self-guided) activity by means of various technologies, such as information transfer technologies or developmental technologies, exerts effect on various channels for the perception of information, which initiates involuntary cognitive activity. Such interactive technologies as brainstorming, corporate interaction, simulation games cause personality changes and help develop personality traits, as well as producing educational and developmental effect.

2. Application of such meaning-making technologies as creative-meaningful tasks, problem-based learning, discussion methods focused on the system of values, involves initiation of higher levels of motivation which are linked to the students' personal meanings. As a result, students deem learning and knowledge acquisition necessary, and this triggers post-voluntary cognitive activity.

3. Assessment plays an important role in distance learning, being an indispensable element of guided learning. Regular computer-aided assessment helps students to develop self-control and self-assessment, which, in turn, triggers voluntary cognitive activity.

4. Taking advantage of information technologies in distance learning activates other psychological mechanisms. Thus, higher proportion of independent (self-guided) activ-

ity and lower proportion of teacher-guided activity enable teachers to make their guidance much more focused. By communicating with the student, the teacher sets out the guidelines, while the student chooses their path to achieve the goal. As a result, active participation in one's own learning process helps the student to increase their self-esteem and self-assessment.

5. Within the framework of distance learning which involves both learning through radio and TV and the use of the available telecommunication channels, the teacher-student link happens to be closer, as, on the one hand, it is more accessible in terms of time and space, and on the other, it is more individualized and personalized, which facilitates the initiation of students' cognitive activity as well. Developing students' creativity through creative-meaningful tasks is an important feature of distance learning.

6. Despite the fact that the process of distance learning looks "impersonal" and "formalized" on the surface, it actually possesses some deep structure with an enormous developmental potential. However, researchers still disagree about the subject matter and scope of distance learning and distance education, as well as the choice of methods, means, technologies which possess a greater potential to develop, encourage and motivate, so that students' personalities could successfully de-

velop in the course of distance learning.

7. The "Competent" teachers, compared to the "Lacking in competence" ones, were found to have been employing a wider range of methods, means and course elements in terms of independent (self-guided) activity initiation technologies. At the same time, the percentage of interactive lectures, interactive seminars, glossaries and test tasks, - interactive, developmental and aimed at initiating students' meaning-making, - was much higher relative to the percentage of other types of tasks in the course. "Lacking in competence" teachers showed indifference to distant learning issues and had lower percentage of tasks aimed at initiating students into independent (self-guided) activity, although they were much more focused on the thorough teacher-student information delivery using videoconferences and video materials, which indicates that even in the distance learning process these teachers attach more weight to the traditional role of a teacher.

ACKNOWLEDGMENTS

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INTERPERSONAL RELATIONS IN SCHOOL

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ABSTRACT

As part of the scientific project titled "The Curriculum of Social Competences and Relations in School", the aim of this paper is to examine the quality of interpersonal relations between teachers and pupils. On a sample of 432 teachers from 20 towns, 35 primary schools in the Republic of Croatia, and 432 pupils, it was confirmed that there is a difference in the appraisal of the quality of their interpersonal relations. Although the overall quality of interpersonal relations between pupils and teachers is at a moderately satisfactory level, pupils still appraise the quality of interpersonal relations lower than their teachers. In view of latent dimensionality, a factor questionnaire structure was used (14 variables; ordinal type) and two main components (subscales) determined: *didactic support and interaction, and rough verbal and physical treatment*. As part of the differential draft of our research, no gender differences were established (between female and male teachers) in the appraisal of the quality of interpersonal relations with pupils (on two subscales). The correlation analysis confirmed a low negative statistically significant correlation between the years of service and the subscale *rough verbal and physical treatment (Rho=-0.101)*. In view of the subscale of rough verbal and physical treatment between pupils and teachers, such results on a negative correlation imply that older teachers, as opposed to their younger colleagues, use more corporal punishment in schools, treat pupils rudely, use nasty and impolite words, and call pupils insulting names.

1. INTRODUCTION - INTERACTION AS SINGULARITY

From the appearance of the first hominids to modern humans, the ability to live in a community is an ability *par excellence*. We can thank our ability to co-exist, cooperate, learn, share, help, and play with other people for our evolutionary development. Other people interact with us and leave an indelible mark on us. And this is not unusual since a certain mutual relationship and interaction (from our viewpoint *socio*) actually transcends ourselves and is characteristic of the whole life on earth.

In the animal kingdom, animals that live in communities have a better chance of surviving as a species. Their ability to hunt, protect themselves from predators, and reproduce is increased through such a relationship. From the position of positivism (Auguste Comte, 1798-1857) and an explanation of the connection and mutual relationship of the social and natural sciences, we can suppress *socio* as an interaction of sorts to the molecular/atomic level. Actually, the mentioned doctrine tells us that the laws that govern the social sciences (e.g., behaviour) are identical to the behaviour of matter (atoms, molecules). These are invariable laws that apply to everything. If we observe interaction from the aspect of particles, then we see the relationship/influence of one particle on others. At the atomic/molecular level, basically this is interaction, relationship/co-relationship. The subatomic level is interaction between what are known as protons and electrons, and the interaction itself can be divided into electromagnetic interactions, weak atomic interactions and strong atomic interactions. Of course, the very structure of electrons, protons and other particles can be divided. In other words, they consist of quarks that are divided into three types and three "anti-types". A description of such in-

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teractions is provided by quantum mechanics (basically, these are quantum field theories, string theory...). In brief, quantum mechanics has more of a statistical character; it tells us about the probability of some events and describes objects in wave functions. Such an assumption, that particles are at the same time waves, was proven both in practice and theoretically (electron interference and the De Broglie relation). The singularity of interaction (the counterpart of *socio*) also consolidates gravitation as a fundamental force of nature. It is the universal force of objects to attract other object(s). It is always attractive (as opposed to electrically charged particles), although quite weak because particles are mostly held together by electrical forces that are stronger than the gravitational ones. This is interaction: the activity of one particle on another, that is, their mutual relationship.

Based on the principle of positivism, if we observe *socio* as interaction, then the basis of everything is some sort of interaction that has consequences on the behaviour of whoever is part of the interaction. Whether at the subatomic level or with humans, interaction (*socio* from the anthropological viewpoint) is a phenomenon that relates to singularity. Interaction observed from the position of the subatomic, atomic, molecular level or the level of the social world and/or from the universal cosmic aspect creates a vast spectrum of possibilities that create certain connections and co-relationships. Such co-relationships based on interactions create or have consequences on the behaviour of the component factors (parts) of such interactions. In the field of the social sciences that are based on the biopsychosocial structure of man, the study of interactions is the subject of much research within various scientific disciplines. However, on the grounds of the non-coherence, poor nomothetics, plausibility, and predictability of the social sciences, it follows that the results of research on the influence and consequences of such interactions are questionable. These results are mostly only declarative, and they do not deal with the field of education at a sufficient empirical level. However, the complexity of such research of interactions is also implied on the basis of positivism in the field of the natural sciences. It surpasses determinism, and emphasises probabilism, that is, the probability of certain outcomes of such interactions at the quantum level and in the behavioural field. Research of interactions/interpersonal relations in the field of education is extremely complex, because the prediction of someone's behaviour is not conditioned unambiguously but is a matrix that has an x of still unknown inputs, which form part of the final probable outcomes of someone's behaviour.

The amazing world of science often transcends reason and resembles more a fairy tale than common sense. In the field of the natural sciences, the pronounced asymptoticity of cognition guides scientists to examine various complex connections, interactions that are part of our understanding and vision of the micro and of the macro world. Further, there is a sort of compatibility between the functioning at the smallest (subatomic) and at the largest (known to us, cosmic) level, which is based on a series of known and still unknown interactions between the component parts of the subject matter of this research.

Interaction as singularity consolidates the laws in which the world as we know it functions. Often such laws are more difficult to see because they are at the subatomic, molecular level, while at the level of human behaviour they are there for further research. Pedagogy and other sciences that study the process of upbringing and education should acknowledge the results of research of the natural sciences in their active research of a series of aspects pertaining to interactions in education. The results of such research will advance the process of education and improve our understanding of ourselves.

1.1. The teacher/pupil relationship

Today, as we stand witness to the exponential development of technologies that have come to substitute interpersonal relations and where we see young people living in a virtual world, a world of their own avatars, the school is seeking answers about how to replace certain anomalies. The family as the basic building block of society is falling apart and the relations within it are often dysfunctional. The young find it harder and harder in today's neoliberalism to meet the expectations of society, of their parents and/or of themselves and are growingly exposed to alcohol and/or other addictive behaviours. Therefore, it is necessary to guide the modern school towards the components of both upbringing and interpersonal relations. Actually, the school role of upbringing and its social role have atrophied, since various social phenomena are peeping "through school doors and windows" and often enter in, for example in the form of aggression and violence and other types of socially

unacceptable behaviour of pupils and teachers (Previšić, 2003, 16-17).

The modern school seeks answers to emphasise its efficiency and recognition in the preparation of young people for modern society. Every person has the need to live in the company of other people and to be accepted and to have a certain position in that society. Individuals have strong emotions-social emotions - that follow from that need (Furlan, 1967, 160). As we pointed out in the introduction, social relationship is a type of evolution *par excellence*: observed through interaction it is singular, which is why schools, as their primary duty, should build the totality of the processes of upbringing and education on the foundation of high quality interpersonal relations.

One of the preconditions for a successful teaching process is a good relationship between the teacher and the pupil, although the said relationship actually envelops a triad of co-relationships by and between the teacher, pupil, and the parent. The relationship is not unambiguous, since it can be based on authoritarianism or authority. "It can be based on mutual trust but also on discomfort, even fear. Work on the relationship, that is, its true values, is the never-ending task of the teacher" (Marinković, 2008, 80). Consequences of the relationship between the teacher and the pupil leave a permanent imprint on the development of the pupil. In this sense, (Klarin, Lukić and Ušljeberka, 2003) shows that fear and distrust in the pupil as the result of his or her relationship with the teacher lead to what he refers to as the "six Rs":

1. Resentment occurs because we hurt pupils, we punish them without justification, humiliate and embarrass them before their schoolmates; it fuels the desire for revenge;
2. Resistance occurs because the pupil's human rights are threatened; sometimes there is ambivalent behaviour;
3. Rejection occurs when we manipulate pupils in a way to make them dependent on punishment and rewards; some of them satisfy their need for power through rebellion and refusal to co-operate;
4. Retreat on account of the teacher's fear; retreat and distancing; possible development of internalised behavioural problems;
5. Reluctance: pupils refuse to co-operate, they are idle and lose interest in school; this is reflected in their results and in loss of motivation;
6. Revenge takes place when pupils destroy school property; they compensate for the deteriorated relationship with the teacher.

The relationship between the teacher and the pupil, or the quality of the relationship, is connected with the pupil's success in school (Klarin, Lukić and Ušljeberka, 2003). The characteristics of a pupil are not a good predictor of his or her success outside the school, where a large part of the differences in accomplishments can be explained by the complex characteristics of the social structure of the school (Juul and Jensen, 2010, 46).

Further, the quality of interpersonal relations between the teacher and the pupil can be observed as part of the development of the pupil's creativity. Creativity is basically something inherent in anybody, but it is dependent on one's lifestyle-from prenatal, natal, preschool and school to old age-and on an individual's connections with his or her surroundings (Juul and Jensen, 2010, 46). Connection with one's surroundings can be observed as interaction with the surroundings, that is, interpersonal relations. It is interesting that the author shows that preschoolers are more creative than children who go to school, despite the extensiveness of pedagogic action. The reasons for this can be examined further from the perspective of interpersonal relations that dominate and develop in the preschool institution as opposed to school. The child's willingness and ability to co-operate is a cornerstone for the development of his or her personality and for the upgrading of what we refer to as the "survival strategy" (Glasser, W. and Jakovlev, B. (1999)). The teacher's persistence, patience, listening, and encouragement of the pupil's inclusion in the teaching process, and at the same time the teacher's action towards the pupil's education and development of his or her competences, create conditions essential for co-operation (Glasser, W. and Jakovlev, B. (1999)). Such co-operation, in the didactic sense, can be viewed as pedagogic leadership. Pedagogic leadership means influencing people with the intention of having them change their positions and behaviour (Glasser, W. and Jakovlev, B. (1999)).

The role of the teacher (according to Glasser, W. and Jakovlev, B. (1999)) includes a palette of pedagogic care that goes beyond the activities and relations in school to encompass the life and work of the pupil in its totality. The authors place emphasis on trust

shown to the (class) teacher, which "assigns to the teacher the role of the first person who helps pupils and provides them with support and guidance".

Any quality interpersonal relationship between the teacher and the pupil is based on a good example. The teacher is a model of sorts for pupils in terms of his or her behaviour, learning, gestures, relations with other people. If "you expect pupils to be polite, then you should not lose your temper or be sarcastic towards them" (Glasser, W. and Jakovlev, B. (1999)). Therefore, we can talk about mirroring in terms of the behaviour of pupils and the behaviour of their teacher.

In describing the conditions for quality work in school, as the first condition, Glasser, W. and Jakovlev, B. (1999) singles out an encouraging and pleasant atmosphere in the classroom that is based on solid friendships between teachers and pupils, and between pupils, teachers, and the school staff. The author emphasises that the foundation of trust and friendship is that pupils can talk to teachers truthfully and without any reservations (ibid. 36). In Glasser's school of quality, successful teaching is based on solid relations, and relations are based on trust and respect, and then disciplinary problems (not incidents) will disappear (Klarin, 2006, 93).

Pianta, 1994 (according to Šimić-Šašić, S. and Sorić, I. , 2010) systematises six different types of possible relationships between the teacher and the pupil (child):

1. A dependent relationship, based on trust and reliability;
2. Positive involvement, based on care and communication;
3. A dysfunctional relationship, characterised by low inclusion, anger and difficulties;
4. An averagely functional relationship;
5. An anger-based relationship, characterised by frequent conflicts;
6. An uninvolved relationship, characterised by a low level of communication, absence of care, and anger.

With the aim of improving teacher-pupil interaction and ensuring the better school results of pupils, it is necessary to act on the variables of the stimulation of the professional development of teachers or of the improvement of various aspects of the teaching task (Huitt, 2003). The results of research are in conformity with the transaction model of the process of teaching/learning (Gossen, D. C. and Despotović, M., 1994), which emphasises

the teacher's individual characteristics that affect not only the behaviour of the teacher in the classroom but also learning achievement.

The quality of the teacher/pupil relationship in our schools has not been sufficiently evaluated; it is actually part of the hidden curriculum, but it leaves an immense mark on the totality of the process of upbringing and education. Just as in other activities, we are not the same in terms of the quality of work that we perform. Just as there are successful and less successful cooks, hairdressers, doctors, so there are also differences between teachers. In line with the said difference, Brajša (1995) presents the dichotomy in effective and ineffective teachers (Figure 1).

Effective teachers	Ineffective teachers
Ask questions as follows:	• Avoid conflicts and discussions
• What do we have to think of?	• Put emphasis on the correct answer
• How would you like to do it?	• Give a lot of homework
• How can I help you?	• Often hold tests and exams
• What did we agree? What is the rule? Can you comply with the rule?	• Draw up instructions for tests
• Do you think that what you are doing is good? Can you change that?	• Keep a distance
• That won't work in this case; think of something else.	Phrases used: "It won't work; all children from this family are the same; can't you see I don't have time; I cannot do that for everyone; he needs a therapist and I can't help him; nothing new, we have already tried that..."

Figure 1. Categorisation into effective and ineffective teachers

The above categorisation of teachers shows that the stress of performance and effectiveness lies in interaction, the relationship between the teacher and the pupil, which, based on the above categorisation, rests on high-quality communication from a didactic standpoint.

Neill, S. and Mikulić, G.,1994 enumerates the differences between successful and unsuccessful teachers. A successful teacher is provocative and has clear and definite goals; he or she is organised and altrocentric. An unsuccessful teacher is unduly relaxed, does not have clear and definite goals, he or she is disorganised, wants to be the winner, is egocentric, is not a good associate and does not take care of himself or herself. The question arises about whether parents know what the teacher is like and whether they would replace him or her. It is clear that in state schools parents do not have an opportunity to choose the teacher,

which is bad, because in this way the system protects those teachers who have missed their calling and who should not work with children.

It is worrisome that there are teachers who work in schools who do not have good relations with their pupils, and then pupils pass on such behaviour and develop it while growing up. Parents entrust their child, as the most valuable thing in their life, to the school (teachers). They have the right and responsibility to know how their children are treated, communicated with, how they behave... It is not worth emphasising grades and knowledge to the detriment of interpersonal relations. The mentioned competences and knowledge develop from the said singularity of interactions/ interpersonal relations.

The quality of relationships and classroom communication can also be observed through non-verbal communication that may be interpreted in several ways (Neill, S. and Mikulić, G.,1994). It is necessary to acquire knowledge and the ability to recognise one's own and other people's body language, since non-verbal communication can affect the establishment of quality interpersonal relations (see Andrilović and Čudina, 1988).

Table 1. Totality of behaviour of pupils and teachers

| EMOTIONAL SETTINGS | Behaviour of the teacher | | | Behaviour of the pupil | |
	Planning, realisation of instruction	Approach to instruction	Methods	School results	Emotional security
SENTIMENTAL	improvised	Impulsive, variable	Free individualisation	Depends on ability, poor success in correlation with emotionally insecure children	Poor, can be good for children who identify with the teacher
WARM: the teacher- • listens carefully • accepts the pupil's emotions and suggestions • detects the pupil's reactions; he/she praises and encourages them	• responsible • systematic • activity-oriented/planned • clear explanation of the plan • explanation of criticism	Simultaneous, imaginative	Works best in discussions, frontal instruction and free individualisation	Very good when teaching methods are aligned with the characteristics of pupils	Very good when balance is established between freedom and guidance of the pupil
COLD –"FROM ABOVE" • superiority • belittling of pupils	• arbitrary rules and commands • use of force and coercion, even when not necessary • demands more than the pupil can do • non-constructive criticism	Routine, unimaginative and boring	Best at lectures	Very good in defined tasks, Poor results for pupils who are negative	Poor for most children

An interesting comparison of the behaviour of teachers that affects the behaviour of pupils and their school results and emotional security is shown in Figure 1 (Klausmeier & Goodwin, 1975, according to Brajša, Brajša-Žganec and Slunjski (1999)).

As is clear from Table 1, the behaviour of teachers is directly linked to the behaviour of pupils. The teacher is the director, scenographer, costume designer, producer, and an actor in the film of the life of each and every pupil. The film is about growing up, gaining experience, and preparing for adult life. Roles in the film are intertwined, but the act of creating the film is in the hands of the teacher. The script is initially written by the teacher and then, through co-operation, social interaction, the pupil changes the roles, modifies the script in line with his or her abilities, possibilities, and wishes. Their (interpersonal) relationship is of fundamental importance in determining the further progress of that film of life. Through such relationships and learning, a script with a happy ending is produced.

In describing the intelligence of relations (the authors refer to it as relational in-

telligence, citing the German psychologist Stefan F. Gross.), Brajša, Brajša-Žganec and Slunjski (1999) put emphasis on the behaviour of the child as having a "separate personality", which means that pupils are valued and that their individuality is respected. They need to see interest, sympathy, enthusiasm; they should feel important and should receive special attention in front of other children. There should be no belittling. There should be mutual respect and the teacher should listen to each pupil attentively (Bukowski and Hoza, 1989).

1.2. The arena of relations between pupils

As a heterogeneous community, the classroom is an arena of relations. In that arena, one has to "fight" for one's position in the specific hierarchy of personal recognisability and importance. Relations taking place within the arena are to a certain extent a reflection of adult relations. Further, considering that younger children are honest, the relations are sometimes more rigid than is the case with adults who skilfully hide their intentions in relation to other persons. Experiences gained in such an arena of relations leave an imprint on the individual that follows and marks him or her (to a certain extent) further in life. Children who experience trauma and/or abuse by peers (or adults) in school (or outside school) suffer from a certain level of psychological consequences. For this reason, the school should guide curricular activities towards the building of quality relations between pupils. In the field of psychology, the model of peer relations consists of popularity and friendship. A detailed model was developed by Ladd, 1989. With the aim of stepping outside the psychological interpretations of the mentioned components of peer relations, in the text below we emphasise the didactic *specificum* of encouraging quality peer relations. The teacher has a significant role in developing quality relations between pupils, and such a didactic *specificum* can be viewed through the prism of the following activities:
- encouraging group work (team work);
- workshops/activities in developing prosocial behaviour.

The importance of group work that is characterised by mutual co-operation and respect, assistance, sharing of responsibility and obligations, and success and failure is recognised from a didactic (methodical) position.

Further, the quality of peer relations is connected with a child's cognitive development, his or her abilities and social competence (Borovečki and Čiček, 1986, 311).

Quality peer relations develop through the encouragement of group work that can be implemented in almost all types of teaching contents. Instruction in this form is a *specificum* not only for the realisation of teaching tasks/learning outcomes, but also for the development of interpersonal relations between pupils. Pupils project co-operation forms in instruction to their life outside school. The classroom is a heterogeneous setting in which each pupil should fight for and build his or her recognisability, uniqueness. Building such uniqueness and recognisability pushes some pupils towards risky social behaviour, such as verbal and/or physical aggression, defiance, docility, quarrelsomeness, and other externalised (but also internalised) types of behaviour. There is a narrow line between risky social behaviour and acute behavioural disorders. Some pupils cannot find their recognisability in the said behavioural activities but withdraw from their colleagues and manifest internalised behaviours such as anxiety, introversion, absent-mindedness, weepiness, and other behaviours linked to depression. With their absent-mindedness, inactivity, disillusionment, sorrow, suppressed anger or dissatisfaction, some pupils undermine the healthy psychological and physical development characteristic of their age. Although at first such states do not pose a big problem, they are even more dangerous than the behaviour of those pupils who show active behavioural disorders, because they cause the further development of psychological dysfunction.

Adaptation difficulties and behavioural disorders may be a passing but also a permanent characteristic of behaviour and life. Difficulties arise from the inability to find a way of satisfying one's needs and desires in a socially acceptable fashion. Delayed fulfilment of personal needs and the inability to re-direct one's wishes from unacceptable objects to acceptable ones are the main characteristics of difficulties with adaptation and behavioural disorders (according to Greene et al. (2008)). It is precisely group work that serves to fulfil the needs of children so that in their social relationships with their peers they can prove themselves in a socially acceptable manner.

Workshops/activities entailing the development of prosocial behaviour are significant for quality peer relations. Prosocial behaviour or behaviour directed at helping

others creates behavioural patterns that are characteristic of social competence. Diametrically opposed to prosocial behaviour would be antisocial behaviour. Ma Hing et al. (2007) show that prosocial and antisocial behaviour should be observed in interaction in order to be able to fully understand the nature of social competence. This can be observed from the point of view that the development of prosocial behaviour is connected with the reduction of antisocial behaviour. The research of Ma Hing et al. (2007), which indicates that a lack of social competence is a significant problem in aggressive children, confirms this. In this sense, these authors state the importance of video feedback in schoolyards to encourage the prosocial behaviour of aggressive pupils. It is obvious that prosocial behaviour encourages pupils' social competence and is an alternative for aggressive behaviour. Ma Hing et al. (2007), as a result of the study on the encouragement of prosocial behaviour in Chinese adolescents, suggest that positive peer interactions, good family settings, and a positive socially-oriented personality increase the prosocial orientation of adolescents.

Curricular activities should include workshops aimed at developing mutual assistance. This would include the detection of pupils, individuals, families, and institutions that need assistance. A plan of activities, a workflow, is then drawn up to provide assistance. By helping others, pupils learn to co-operate, share, empathise, and so on. They embrace moral principles; they learn to understand themselves and others, and they learn not to be egotistical.

The school as an arena of peer relations is imbued with interpersonal relations. In a very early stage of development, children learn how to act and they develop what they learn into certain modalities of their own recognisable behaviour. As they grow, the positions acquired in such an arena of relations are strengthened and they act accordingly. It is of paramount importance for the school, as an arena of interpersonal relations, to supervise and develop the quality of such relations appropriately and in a controlled manner. Later, many difficulties that adults encounter in the way they perceive the world around them- their uniqueness, goals, purpose-stem to a certain extent from the school arena of peer relations (but also relations with other persons). It is the primary role of the school in developing high-quality mutual relations to develop social competence, which is of vital importance for any society.

2. MATERIALS AND METHODS

In view of interpersonal relations, one of the goals of this project is to examine the quality of interpersonal relations between teachers and pupils. As in the introduction to this paper we stressed the importance, role, and the consequences of the quality of relations, the results are important in order to perceive the real "picture" of the quality of relations in our schools.

In line with the empirical part of the project titled "The Curriculum of Social Competences and Relations in School", the sample of interviewees for this paper consists of 432 teachers from 20 towns and 35 primary schools of the Republic of Croatia, and 432 pupils. The structure of teachers based on their subjects is shown in Table 2. For ease of review, the subjects are classified into groups.

Table 2. Field of work of teachers (subjects)

Fields of work (subjects)	Number	Percentage
Mathematics, informatics	82	18.9
Languages (foreign languages and Croatian)	152	35.2
Visual and performing arts (art, music)	32	7.4
History, geography	47	10.8
Natural sciences (biology, physics, chemistry, nature)	48	11.1
Physical education	24	5.6
Technical culture	9	2.1
Classroom instruction	7	1.6
External associates, headteachers (rehabilitator, librarian)	3	0.6
Religion	28	6.5
		In total: 432

The sample of variables consists of 14 items that examine the level of interpersonal relations between pupils and teachers. It is an ordinal 5-point Likert-type scale: 1- strongly disagree, 2 - disagree, 3 - neither agree nor disagree, 4 - agree, and 5 - strongly agree. We tested the reliability of the scale via the internal consistency method (based on the alpha model), where Cronbach's alpha is 0.921, which implies high reliability.

3. RESULTS

In view of the 14-item scale used, the main descriptive values are shown in Table 3.

Table 3. Main descriptive values of the scale

Items	min	max	mean		std. dev.	mod	skewness	kurtosis
	stat.	stat.	stat.	std. error	stat.	stat.	stat.	stat.
P10.1 Most teachers in your school respect and acknowledge the opinion of their pupils	2	5	4.00	.035	.732	4	-.538	.352
P10.2 Most teachers in your school believe in their pupils	2	5	3.94	.034	.709	4	-.430	.287
P10.3 Most teachers in your school support pupils and help them	2	5	4.23	.032	.655	4	-.429	-.064
P10.4 Most teachers in your school find it easy to make pupils interested in learning	2	5	3.77	.034	.711	4	-.187	-,132
P10.5 Most teachers in your school use group work in class	2	5	3.84	.037	.765	4	-.253	-.287
P10.6 Most teachers in your school maintain order and discipline in class without excessive strictness	1	5	3.75	.036	.742	4	-.386	.231
P10.7 Most teachers in your school resolve problems and conflicts successfully	2	5	3.89	.033	.678	4	-.224	.014
P10.8 Most teachers in your school have a sense of humour	2	5	3.71	.036	.744	4	-.161	-.249
P10.9 Most teachers in your school are in a good mood	1	5	3.83	.037	.763	4	-.367	.099
P10.10 Most teachers in your school talk to pupils	1	5	4.07	.030	.615	4	-.765	2.749
P10.11 Most teachers in your school do not use physical punishment	1	5	4.70	.027	.564	5	-2.197	6.568
P10.12 Most teachers in your school are polite towards pupils	2	5	4.42	.032	.655	5	-.833	.271
P10.13 Most teachers in your school do not use nasty and impolite words when they are angry at the behaviour of a pupil	2	5	4.38	.033	.694	5	-.831	.133
P10.14 Most teachers in your school do not call pupils insulting names	2	5	4.40	.032	.674	5	-.861	.350

As evident from Table 3, the values of the measures of central tendency (arithmetic mean and mode) are high, which in view of the polarisation of the scale shows that there is a tendency of higher values in the perception of teachers towards the quality of relations between the teacher and the pupil (4 - agree, 5 - strongly agree). In a word, there is a mildly negatively asymmetrical distribution, which is in line with the higher values of the arithmetic means. In line with this, the distribution of all items deviates from the required normal distribution (Kolmogorov-Smirnov; $p \leq 0.05$ on all items). Also, in view of the kurtosis of the distribution, these are mostly mild leptokurtic distributions (other than items p10.10 and p10.11 – pronounced leptokurtosis). The other four items are mildly platykurtic (p10.3, p10.4, p10.5, p.10.8).

Considering that the perceptions of teachers concerning the quality of interpersonal relations between them and pupils are mostly positive, it was interesting to see the extent to which they differ from the perceptions of pupils. From the total sample of interviewed pupils (N=2661), based on the method of random number (randomisation procedure), 432 were singled out to compare with those of teachers. The items (14 of them) are identical; they were only semantically transformed for teachers and pupils respectively. The comparative values of the arithmetic means for the teacher and the pupil on the scale of quality of interpersonal relations between pupils and teachers are shown in Table 4.

Table 4. Differences between the arithmetic means of the subsamples

Items	arith. mean (teachers)	mod	arith. mean (pupils)	mod	t test		arith. mean (both subsamples)	Mod of both subsamples
	stat.	stat.	stat.	stat.	stat	stat. sign.	stat.	stat.
P10.1 Most teachers respect and acknowledge the opinion of their pupils	4.00	4	3.30	4	-10.764	0.00	3.65	4
P10.2 Most teachers believe in pupils	3.94	4	3.38	3	-8.907	0.00	3.66	4
P10.3 Most teachers support pupils and help them	4.23	4	3.52	4	-11.876	0.00	3.88	4
P10.4 Most teachers find it easy to make pupils interested in learning	3.77	4	**2.86**	3	-13.702	0.00	3.32	4
P10.5 Most teachers use group work in class	3.84	4	3.09	3	10.886	0.00	3.47	4
P10.6 Most teachers maintain order and discipline in class without excessive strictness	3.75	4	3.03	3	-10.589	0.00	3.39	4
P10.7 Most teachers resolve problems and conflicts successfully	3.89	4	3.20	4	-10.347	0.00	3.55	4
P10.8 Most teachers have a sense of humour	**3.71**	4	3.02	4	-9.365	0.00	3.37	4
P10.9 Most teachers are in a good mood	3.83	4	2.94	3	-13.173	0.00	3.39	4
P10.10 Most teachers talk to pupils	4.07	4	3.65	4	-7.252	0.00	3.86	4
P10.11 Most teachers do not use physical punishment	4.70	5	4.32	5	-6.076	0.00	4.51	5
P10.12 Most teachers are polite towards pupils	4.42	5	3.70	4	-11.638	0.00	4.06	4
P10.13 Most teachers do not use nasty and impolite words when they are angry at the behaviour of a pupil	4.38	5	3.80	5	-8.292	0.00	4.09	5
P10.14 Most teachers do not call pupils insulting names	4.40	5	3.65	5	-10.389	0.00	4.02	5

As evident from Table 4, the values of the arithmetic mean of all items are lower for pupils than for teachers. Item 10.4: Most teachers find it easy to make pupils interested in learning has the lowest value for pupils (M=2.86), while for teachers, the lowest value is for item 10.8: Most teachers have a sense of humour (M=3.71). It is interesting that the high perceived quality of interpersonal relations between pupils and teachers coincides with the same items: *most teachers talk to pupils, they do not use physical punishment on pupils and are polite to pupils, they do not use nasty and impolite words when they are angry at the behaviour of a pupil, and do not call pupils insulting names.* Although it follows from the arithmetic means that the perceived quality of interpersonal relations between pupils and teachers is different—where the pupils hold the relationship to be of lower quality—the said differences were tested via the independent sample t-test. The results of the t-test (Table 4), where the values assume that the equality of variance is not met, confirm statistically significant differences of the arithmetic means with respect to all items, that is, teachers and pupils from the sample are different in terms of the perceived quality of interpersonal relations. It is implicitly concluded from the statistically significant differences on all variables, on the basis of the values of the arithmetic means of the subsample, that pupils hold the quality of interpersonal relations to be lower than teachers. Therefore, although the total level of the quality of interpersonal relations between pupils and teachers is satisfactory, pupils still give a lower score to the quality of interpersonal relations than teachers.

In order to gauge the latent dimensionality of the scale of interpersonal relations between teachers and pupils (on the sample of teachers), a factor analysis (the method of principal components) was used. The collinearity of the substrate of 14 variables of corre-

lation coefficients is mostly moderate, which indicates a relatively homogenous area, that is, the possibility of the existence of latent dimensions responsible for their mutual variation. Singularity (r=1) or high collinearity (r>0.90) is not evident. The suitability of the matrix for factorisation was tested with the KMO test. The coefficient (KMO) 0.870 shows the high suitability of the matrix for factorisation. Via the Bartless test of sphericity, we tested whether the matrix of correlations is identical to the matrix of identity. Based on the results of the test ($\chi2$=3763.462, df =91, p=000), it is implied that the correlation matrix is statistically different from the identity matrix, which permits the extraction of factors, that is, the continued implementation of the factor analysis.

According to the Guttman-Kaiser criterion (and Cattell's scree test), two main components that account for 62.0% of the variance were extracted. Table 5 – Compound Matrices shows the weighting components conducted on the direct oblimin oblique angle rotation with four iterations (>0.40). The weighting components coincide with the coefficient level of individual manifest variables with components.

Table 5. Compound matrices

Items	Components	
	1	2
P10.1 Most teachers in your school respect and acknowledge the opinion of their pupils	.678	
P10.2 Most teachers in your school believe in their pupils	.738	
P10.3 Most teachers in your school support pupils and help them	.695	
P10.4 Most teachers in your school find it easy to make pupils interested in learning	.813	
P10.5 Most teachers in your school use group work in class	.682	
P10.6 Most teachers in your school maintain order and discipline in class without excessive strictness	.736	
P10.7 Most teachers in your school resolve problems and conflicts successfully	.756	
P10.8 Most teachers in your school have a sense of humour	.853	
P10.9 Most teachers in your school are in a good mood	.805	
P10.10 Most teachers in your school talk to pupils	.629	
P10.11 Most teachers in your school do not use physical punishment		.854
P10.12 Most teachers in your school are polite towards pupils		.625
P10.13 Most teachers in your school do not nasty and impolite words when they are angry at the behaviour of a pupil		.860
P10.14 Most teachers in your school do not call pupils insulting names		.810

As evident in Table 5, two subscales were generated. The first subscale (SCALE OF DIDACTIC SUPPORT AND INTERACTION) consists of items that mostly relate to the didactic part of the quality of interpersonal relations between pupils and teachers, while the second subscale consists of behaviour (p10-11 to p10-14), which is more characteristic of ROUGH VERBAL AND PHYSICAL TREATMENT between pupils and teachers. The reliability of the subscales was tested via the method of internal consistency under the alpha model: Cronbach $\alpha1$ =0.915, $\alpha2$=0.865.

Below we examine gender-related differences between teachers in terms of their appraisal of the level of quality of interpersonal relations between them and the pupils. An independent sample t-test was used, under the assumption that the variances are inhomogeneous. The results of the t-test are shown in Table 6.

Table 6. Results of the t- test

Components	t	df	Stat. significance
Didactic support and interaction	1.702	114.364	0.092
Rough verbal and physical treatment	-0.759	110.825	0.450

As evident from Table 6, there is no statistically significant gender difference among teachers in view of the perceived quality of interpersonal relations between teachers and pupils. On both subscales of interpersonal relations (the scale of didactic support and action and the scale of rough verbal and physical treatment), there is no difference among female and male teachers in terms of their perception of quality. However, in view of the disproportionate ratio of female and male participants (76 male teachers, 356 female teachers), we also applied the non-parametric equivalent of the t-test: the Mann–Whitney U test. The values generated as a result of the Mann-Whitney U test also did not establish any gender differences on either scale (U_1=12208, Z_1=-1.336, p_1=0.182; U_2=12625, Z_2=-0.914, p_2=0.361).

In view of the years of service, the said sample is in the range from less than one year to 45 years of service. Years of work within the education system are often the subject matter of research in view of certain differences and connections. Accordingly, in the draft of the project titled "The Curriculum of Social Competences and Relations in School", one of the aims was to examine such connections. In order to complete the task based on the said sample of teachers, we performed a correlation analysis on the basis of the presented subscales of the perceived quality of interpersonal relations between teachers and pupils (Table 7).

Table 7. Correlations / Spearman Rho

Subscales of the interpersonal relations between teachers and pupils	Years of service	
	Correlation coefficient (Spearman/Rho)	Statistical significance
Didactic support and interaction	0.014	0.778
Rough verbal and physical treatment	*-0.101*	0.037*

*p≤0.05

There is a low negative statistically significant correlation between the years of service and the results on the scale of rough verbal and physical treatment between teachers and pupils. Given that the correlation is negative, it is implied that with the years of service the perceived level of rough verbal and physical treatment as appraised by teachers and pupils is lower. In other words, the older the teachers are the lower is their perception of the quality of interaction between pupils and teachers in terms of the rough verbal and physical treatment between pupils and teachers. In view of the subscale of rough verbal and physical treatment between pupils and teachers, such a result on the negative correlation implies that older teachers hold to a higher degree that their colleagues in school use physical punishment, act rudely towards pupils, use nasty and impolite words, and call pupils insulting names, as opposed to the view of their younger peers.

4. DISCUSSION

The quality of interpersonal relations in school is a matrix of opportunities (and unknowns) whose values in many aspects affect those participating in the relationship. Interpersonal relations seen through the sphere of interactions are actually singular. Interaction transcends the particular scientific subject matter; it is basically singular to the general laws of the functioning and understanding of the matter (the natural sciences) but also the social sciences. It is evolution par excellence.

Analogously, the school is a place where interpersonal relations are extremely rich. The further development of the child in the academic sense (school results), his or her psychophysical stability and social competence, that is, the totality of competences that society expects from him or her later on, depends on the quality of such relations. For that reason, interpersonal relations must be at the very core of the curriculum. Interpersonal relations in schools must not be just a sideline to the learning process, but the very foundation of the learning process (in the wider context).

The importance of the research of the quality of such relations follows from the pronounced importance of interpersonal relations in school. The aim of this paper also follows accordingly: to research the quality of interpersonal relations between teachers and pupils. On a total sample of 432 teachers involved in the project "The Curriculum of Social Competences and Relations in School", the scale related to the quality of interpersonal relations between teachers and pupils presented higher values of the arithmetic mean. It is implied that the level of the quality of interpersonal relations between teachers and pupils (based on the perceptions of teachers) is high.

However, with the aim of generating an accurate "picture" of the quality of such relations, we also tested pupils to examine whether their perceived quality of such relations is different. From the total sample of pupils involved in the project (N=2661), we singled out 432 via the random number method (randomisation procedure) to compare them with the perceptions of teachers. It is evident from the generated results that the pupils' perceived quality of interpersonal relations between teachers and pupils is somewhat lower (weaker) in comparison to that of teachers. This was actually to be expected. It can be concluded from the collective arithmetic means (mod) of the items on the scale of quality of interpersonal relations that the level of quality between pupils and teachers is at a satisfactory level. Still, the quality could be higher, so the results should be interpreted more as a need to develop quality relations between pupils and teachers.

In order to gain insight into the latent dimension of the scale, a factor analysis was conducted (the method of main components). Two components/subscales were extracted. The *scale (subscale) of didactic support and interaction* consists of items that mostly relate to the didactic part of the quality of interpersonal relations between pupils and teachers, while the *scale (subscale) of rough verbal and physical treatment* consists of conduct that is more characteristic of rough verbal and physical treatment between pupils and teachers.

Later, the subscales of the quality of interpersonal relations between teachers and pupils were used. Initially we tested the gender difference in view of the level of the quality of interpersonal relations between pupils and teachers based on the perceptions of teachers. It follows from the results of the t-test that there are no differences between female and male teachers in terms of the perceived quality of interpersonal relations on the subscales.

In view of the comprehensiveness of the empirical part of the project, we included an independent variable—years of service, ranging from less than one year to 45 years of service. Given the wide spectrum (comprehensiveness) of the years of service of teachers from the sample, the author used a correlation analysis (Spearman Rho) to show a low negative correlation (r- 0.101, p=0.037) between the subscale of rough verbal and physical treatment and the years of service of teachers. It follows from the items that make up the subscale of rough verbal and physical treatment between teachers and pupils that teachers with more years of service hold to a higher degree that their colleagues in school use physical punishment, act rudely towards pupils, use nasty and impolite words, and call pupils insulting names, as opposed to the view of their younger peers.

In view of the aim of the research (to examine the quality of interpersonal relations between pupils and teachers), the question arises whether the results show a sufficient quality of such relations. If we compare the results of the perceptions of only pupils (and not teachers), then the results are not sufficiently satisfactory. Pupils had the value of mod 3 on a 5-point scale for certain items—such as: *most teachers believe in pupils, use group work in class, maintain order and discipline successfully and without excessive strictness, are in a good mood, find it easy to interest pupils in learning*—which is actually neutral (they neither agree nor disagree). Naturally, such results indicate an insufficient level of interpersonal interactions between teachers and pupils in terms of the said items. On the other hand, the perceptions of teachers for the same items are higher, that is, the value of mod is 4 (agree).

5. CONCLUSION

The result that strongly emphasises the quality of social relations between pupils and teachers and brings together the perceptions of both teachers and pupils is the values on the subscale of *rough verbal and physical treatment*. Both teachers and pupils assigned the highest value (mod 5: strongly agree) to the quality of relations between pupils and teachers (the subscale of rough verbal and physical treatment between teachers and pupils). The items are as follows: Most teachers *do not use physical punishment, do not use nasty and impolite words when they are angry at a pupil, and do not call pupils insulting names*.

In conclusion, the results imply that the relations between pupils and teachers are at a satisfactory level, but efforts should be made to improve and develop them further.

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Conflict of interests

The author declare no conflict of interest.

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SHIFT FROM EDUCATION TO DEVELOPMENT: LEADERS AND COACHES IN SEARCH OF SHARED WISDOM

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A R T I C L E   I N F O

A B S T R A C T

This paper presents the results of qualitative study aimed to explore the relationship between the perception of behaviors that support people development, core coaching competences and values supporting them, and wisdom-related values. Our hypothesis was that the reflection on empowering behaviors focuses managers' attention on wisdom-related values that are very close to the core values of coaching and therefore facilitate their progress towards wisdom-related performance. Sample consisted of 306 managers (N = 306) interviewed in 28 groups (N = 28) within leadership development programs in Russia, Ukraine and France from 2008 to 2016. We used the open-ended questions method and qualitative content analysis. The results showed high homogeneity of responses and high degree compatibility between behaviors quoted by respondents and the International Coach Federation core competences. In the second part of the study the responses were analyzed from the point of view of beliefs and values that can support desired developmentally focused / coaching behaviors, and compared the outcome with the existing concepts of wisdom. The study confirmed that the professional training in coaching leads to the cumulative development of wisdom (wisdom-related values, wisdom-related knowledge, wisdom-related performance) because the core of the system of coaching values fundamentally coincide with wisdom-related values.

1. INTRODUCTION

The 4th technological revolution and structural crises bring new challenges both for organizations and leaders. Fast and unpredictable changes in life and business environment raise the demand for emotionally balanced and creative leadership, and have impact on the shifts in educational paradigm and people management.

Traditional paradigm of education,

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centered on academic knowledge, traditional teacher-student model of education, with value and focus on collecting knowledge, is getting replaced by developmental paradigm with the idea of transforming experience and/or environment (Klarin, 2016b, Bard and Soderqvist, 2002). Another relevant trend that affects educational paradigm is related with the need to distinguish relevant information from insignificant in the huge and daily multiplying flow of data (Saganenko, 2001). The idea of individual knowledge is also far more often than ever challenged by collective thinking idea.

In past decades development of leaders implied enough time to experience different situations and learn from them. Modern time requires high speed for reactions and decisions that prevents leaders from obtaining natural wisdom by conventional means. The profession of coach emerged as the reaction on the need to faster peoples' maturation: "...

the highest purpose for coaching in troubled times must be to make the leader's implicit wisdom resources more explicit and to help them shape those resources into a personal 'compass' to make wise decisions in the service of a common good" (Klarin, 2015).

It is also highly relevant that nowadays the need for life-long learning is combined with the need for very fast learning. On top of that in many situations where learning is involved, there are no patterns of experience ready to be presented, explained, or taught. The idea of taking long time to adapt pieces of experience for educational transfer often becomes obsolete (Klarin, 2015).

Here come new individual and collective knowledge generative practices such as coaching, facilitation, and moderation that emerged comparatively recently, and already became professional activities and favorable skills for leaders.

Among generative practices coaching is a professionally guided practice that models the key competences of people who empower the growth and development of other people, inspire cooperation and accelerate the progress from reactivity to proactivity, and practical wisdom.

The goal of this study was to explore a relationship of perception of behaviors that support people development and core coaching competences, and to find out what are the values that support such behavior.

The objectives were:

1) to find out if the wisdom related behaviors appear during the experience reflection done by managers;

2) to classify the outcome of this field work applying content analysis;

3) to discover the relation between the major development supporting behaviors with the ICF core competences content and wisdomrelated values.

Thus, this was a qualitative study rather than a statistically based quantitively based research.

2. MATERIALS AND METHODS

Who can be a good role model for leader or the new reality? Of course, the first idea that comes to data driven and knowledge oriented mind is to dive deep into the reading the articles, books and whitepapers.

Experientially focused developmental paradigm inspired us to ask directly those who experience working with many people and various leaders daily, percept their behavior and its impact on them, who can reflect on the best experience in this area, and then utilize the live learning gathered to transform their own behavior as managers and leaders.

Our hypothesis was that the reflection on empowering behaviors focuses managers' attention on wisdom related values that are very close to the core values of coaching and therefore facilitate their progress towards wisdom related performance.

Inspired by P. Webb saying "…wisdom-related knowledge may be latent in people until activated by wisdom task…" (Saganenko, 2001) we decided to check if leadership and coaching skills training for managers based on authority and wisdom concepts can lead to the focus on wisdom related behavior and performance, wise knowledge and values, and therefore stimulate the cumulative development of wise behavior in the communication and people development.

Since 2008 within the corporate leadership development programs for the top and middle management we regularly asked the leaders do the reflective analysis related to their experience of empowering authority. There were 28 groups with total number of 306 participants observed in Russia, Ukraine and France.

The participants working in the groups of 7-14 people were asked to meditate briefly on the following question and share the insights: "Please recall the person or several people who you have perceived and currently perceive as the authority for you, those with whom you have reached the top results in your professional activities and personal achievements. Recall, what exactly these people did or do, that supports your fast growth both personally and professionally". The summary list generated by the group was used as the reference point for further selfassessment and ideas list for the individual development plan.

The material collected was processed applying qualitative open-ended questions method (Mayring, 2000) and further qualitative content analysis (Banicki, 2009).

As a result of this study, we discovered the explicit correlation of the data received with two interrelated domains: coaching competences and the concept of wisdom.

3. RESULTS

Our first discovery was that results received in each group have been highly ho-

mogeneous irrespective of industry (FMCG, banking, heavy industry and mixed groups observed) and the age of respondents.

There was a clear list of behaviors that come regularly within all the groups and among those 30 behaviors of empowering authority people 25 items were compatible with the coaching core competences developed by the International Coach Federation (ICF).

Here is the list of these behaviors grouped in alignment with the competences. We quote the most often wording that respondents used describing the behaviors.

The first significant group of behaviors was compatible with the competence 3 − "Establishing Trust and Intimacy with the Client – Ability to create a safe, supportive environment that produces ongoing mutual respect and trust". In the study, corresponding responses included:

1. Treat you as an equal, do not put themselves above another person.
2. Walk the talk - their words are aligned with their actions.
3. In case of failure they accept responsibility.
4. Support me and the team in difficult/critical situations.
5. Notice when I feel bad, and support.

It is important to mention that all the 11 competences have the detailed explanation and markers that either sounded very similar or could be perceived as rephrasing to the words used by the respondents while they explain what they mean when they name certain behavior. E.g. for item 4 participant said: "She knew that it was difficult task for me and many times encouraged me to relax and focus on what I can learn doing this. She said that the only one who doesn't make mistakes is the one who never does anything", – compare with: coach "Provides ongoing support for and champions new behaviors and actions, including those involving risktaking and fear of failure".

The second big group was compatible with the competence 4 − "Coaching Presence – Ability to be fully conscious and create spontaneous relationship with the client, employing a style that is open, flexible and confident". In the study, corresponding responses included:

6. Not afraid to say that they do not know something, keen to learn.
7. Try new working methods with curiosity.
8. Have a good sense of humor.
9. Know how to laugh at themselves.

10. Keep calm and reasonable in critical situations and help others to cool down.

Comparing them with details of coach expected behaviors for this competence we found the impressive similarity in wording: "Is open to not knowing and takes risks", "Confidently shifts perspectives and experiments with new possibilities for own action", "Sees many ways to work with the client and chooses in the moment what is most effective", "Uses humor effectively to create lightness and energy", "Demonstrates confidence in working with strong emotions and can self-manage and not be overpowered or enmeshed by client's emotions".

The third relevant group referred to behaviors linked with competence 5: - "Active Listening − Ability to focus completely on what the client is saying and is not saying, to understand the meaning of what is said in the context of the client's desires, and to support client self-expression". In the study, corresponding responses included:

11. Know how to listen.
12. Don't like to give advice and ready solutions, but instead they force me to think on my own.
13. Carefully analyze situations and mistakes.
14. Do not accuse, but help me to understand the situation, if something goes wrong.

While leader "Does not accuse, but help me understand the situation, if something goes wrong" (item 14), coach "Allows the client to vent or "clear" the situation without judgment or attachment in order to move on to next steps", "Summarizes, paraphrases, reiterates, mirrors back what client has said to ensure clarity and understanding", and "Encourages, accepts, explores and reinforces the client's expression of feelings, perceptions, concerns, beliefs, suggestions, etc."

The fourth group was compatible with competence 7: "Direct Communication – Ability to communicate effectively during coaching sessions, and to use language that has the greatest positive impact on the client". In the study, corresponding responses included:

15. Give feedback personally and not in public.
16. Explain the logic of their actions.
17. Explain their decisions.

This competence requires coach "Is clear, articulate and direct in sharing and providing feedback", "Reframes and articulates to help the client understand from another perspective what he/she wants or is uncertain about", "Clearly states coaching objectives,

meeting agenda, and purpose of techniques or exercises".

The fifth group was found out to be related with the competence 9 – "Designing Actions – Ability to create with the client opportunities for ongoing learning, during coaching and in work/life situations, and for taking new actions that will most effectively lead to agreed upon coaching results". In the study, corresponding responses included:

18. Entrust me interesting and difficult tasks.

19. Notice my successes and progress.

20. Rejoice when I succeed.

The sixth group was compatible with competence 8 – "Creating Awareness – Ability to integrate and accurately evaluate multiple sources of information and to make interpretations that help the client to gain awareness and thereby achieve agreed upon results". In the study, corresponding responses included:

21. Allow me to learn from my own experience.

22. Explain why it is important to do something.

There were also single answers were compatible with other competences. It was interesting for us that these competences are usually perceived as most typical for coaching when new clients describe it.

Competence 6 – "Powerful Questioning – Ability to ask questions that reveal the information needed for maximum benefit to the coaching relationship and the client". In the study, corresponding responses included:

23. Ask tough questions that help in looking at the situation from different angles.

Competence 10 – "Planning and Goal Setting – Ability to develop and maintain an effective coaching plan with the client". In the study, corresponding responses included:

24. Help in setting up clear goals and objectives.

Competence 11 – "Managing Progress and Accountability – Ability to hold attention on what is important for the client, and to leave responsibility with the client to take action". In the study, corresponding responses included:

25. Do not perceive mistakes as a disaster and help to fix them.

Two other groups of the behaviors that do not correlate with coaching competences can be viewed as traditional educators' behaviors. In the study, corresponding responses included:

26. Have wide experience and generously share it.

27. Generously share information.

28. Explain what you did wrong and help to understand how to act differently.

And team leader's behaviors. In the study, corresponding responses included:

29. Being team leaders they do not arrogate the results in case of success, they share it with the team and emphasize the contribution of each team member.

30. Act equitably.

It was also interesting for us that the word "wisdom" appeared rarely per se but most of the behaviors could be attributed as wisdom related behaviors based on all existing models of wisdom (Kunzmann and Baltes, 2005; Stacke, 2001).

The analysis clearly confirmed that behaviors that can be attributed as coaching related, being perceived without coaching framework, when it is demonstrated regularly, is perceived as supporting people in their learning and development, and creating the atmosphere that helps them overcome the frustration linked to difficult tasks, uncertainty and challenges, and switch to focused and more creative working mood.

4. DISCUSSION

This impact of coaching culture on the atmosphere and performance in the organization serves as a trigger for increasing implementation of coaching and growing investment into developing coaching culture in organizations (Clutterbuck and Megginson, 2006, Baltes and Smith, 1990). In the corporate environment, the predominant task of coaching is leadership development, and the proportion of these cases is growing steadily.

In the second part of our study we analyzed the responses from the point of view of beliefs and values that can support desired developmentally focused / coaching behaviors, and compared the outcome with the existing concepts of wisdom (Kunzmann and Baltes, 2005; Sternberg, 1998; Brugman, 2006).

Although wisdom is often perceived as the product of age, currently wisdom is far more often perceived as emerging in the course of learning from life (Sternberg, 1998).

Our choice of wisdom as a core concept was motivated by the growing interest to tacit knowledge underling wisdom as a basis for high and sustainable efficiency in turbulent times (Sternberg, 1998; Choukhno, 2009; Klarin, 2016a, Klarin, 2015).

The domain of wisdom covers both in-

telligence and personality. It is also clearly related to adult development and the transformation of beliefs and values as a result of reflection on life events and relevant experience. Most of the researches exploring the domain of wisdom paid high attention to the values that shape the wise behavior.

Analyzing our data, we found 6 key beliefs related to such values that help leaders apply developmental and educational approach in their day-by-day practice:

1. Every situation provides learning opportunity.

2. Supporting development every day is good for both people and organization.

3. Empowerment stimulates, rewards and pays back as people become more proactive.

4. People are equal; although we can play different roles all people deserve respectful communication.

5. Awareness and feedback matter and help in achieving top results.

6. Work itself can be an inspiration; people are most productive when they are happy and can enjoy what they are doing.

This list we found coherent with the core values for coaching (Buber, 1958) that are the following:

Awareness;

Proactive life attitude (in a solution of personal, professional, and business objectives);

Responsibility;

Reflexivity and understanding of the performance;

Co-learning attitude (Subject to Subject, Vs. Subject to Object attitude);

Dialogue based;

Non-prescriptive interaction.

A defining characteristic of coaching as a profession is its focus on developing human potential and resources for better decision making and improving the quality of action. This requires global shift of perception of other person as an 'Object' for development to building communication with the person as the 'Subject' – equally knowledgeable and responsible person (Klarin, 2014; Webb 2008).

The importance of Subject-to-Subject approach in stimulating wisdom related behavior was unexpectedly confirmed by the fact that 50% of responses received during our study had focus on 3 competences: Establishing Trust and Intimacy, Coaching Presence and Active Listening, which help coach create and support Subject-to-Subject dialogue where knowledge and values of client are respected

and activated for further transformation.

Following P. Webb (Kunzmann, Baltes, 2005) we concentrated our attention on several approaches to wisdom, which have major relevance to coaching:

1. Wisdom as a system of expert knowledge in Berlin wisdom paradigm (Ardelt, 2004).

2. Wisdom as a property of a person not reduced to expertise (Sternberg, 2005).

3. Wisdom as interaction between person, task and situation − wisdom, intelligence, and creativity, synthesized (WICS) (Kilburg, 2000).

4. Wisdom as a 'mapping" process (Baltes and Smith, 1990).

Within the Berlin wisdom paradigm, which includes five criteria we found a solid basis to our research. Here are these criteria:

1. Rich factual knowledge (possession of 'an extensive data base about life matters'),

2. Rich contextual knowledge (a repertoire of mental procedures (or heuristics) used to select, order, and manipulate the information in the data base and to use it for the purposes of decision making and action planning),

3. Life span contextualism (relating knowledge to 'the many themes and contexts of human life', and 'their interpretations and cultural variations'),

4. Value relativism and tolerance (relating to 'acknowledgement of individual and cultural differences'),

5. Recognition and management of uncertainty (relating to 'knowledge about the limits of knowledge and the uncertainties of the world' (Webb, 2008).

As for wisdom in leadership, the definition suggested by P. Webb includes the following components: (a) the application of the five wisdom criteria of the Berlin wisdom paradigm, drawing from tacit knowledge and personality characteristics (cognitive, reflective and affective), (b) through the acknowledgement of core values, (c) balancing the interests of self, stakeholders and the organizational community, (d) by adapting, shaping or selecting appropriate responses, (e) in order to achieve a sustainable good (Webb, 2008).

The present study shows that relativism and tolerance combined with recognition and management of uncertainty based on wise values helps leaders, coaches and coachcompetent young managers behave reasonably and make wise decisions under pressure.

This study shows that rich factual and contextual knowledge together with life span

contextualism correlated with educator's behaviors is perceived and accepted by young managers supported by coaching Subject to Subject attitude.

5. CONCLUSIONS

This study leads to the conclusion that the wisdom-related knowledge and wisdom-related performance are based on wisdom-related values that can be comprehended by reflection on role models and applying the learning via modeling correlating behaviors.

As the managers are trained in value-rooted coaching behaviors, they compare and transform their perception of their routine and environment, and develop wiser and more mature attitude towards life and other people.

Such core competences as Coaching Presence, Creating Trust and Intimacy, and Active Listening being based on wisdom related knowledge allow leaders treat people as equal, smart, able and responsible, and open trigger access to tacit knowledge.

It means that we can consider and employ coaching wider than just a technology for improving performance but as a wisdom empowering approach that supports and expands developmental paradigm of the new era.

Using significant wisdom-related components shared in coaching and leadership approach we can make it a cultural tool, a tool that will make the wisdom of the present a widely shared legacy of the new generations.

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Conflict of interests
Authors declare no conflict of interest.

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FEATURE CAREER STRUCTURE OF THE IMAGE AT DIFFERENT STAGES OF PROFESSIONAL DEVELOPMENT

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ABSTRACT

The paper describes research carried out in the framework of the study of representations of professional identity. The aim of this paper is to study the image of the career structure and its structural elements. The study was conducted on a sample of 635 people, among them - 388 women and girls and 247 boys and men. The empirical study was carried out on the basis of faculty «State and municipal management» (students of 1 and 5 courses) and «training of civil servants», Russian. Career image includes three components: structural; informative and emotional evaluation. The content of the career image components changes depending on what stage of professional development the personality is. The structural component in the process of professional development varies from amorphous and ill-structured at the first stage of professional development to a clear and specific at the last stage of professional development. The career trajectory changes as follows: at the first, third and fourth stages of professional development the most characteristic is the graph of a career «vertical», and at the second stage it is «plateau». As to the content of career image we can note that the most common for all stages of career development is the dominance of financial goals. Emotional-evaluative component of the career image is maximally differentiated at the second stage of professional development, at all other stages the career image has a common neutral color.

1. INTRODUCTION

In modern Russia, there is a transformation of all spheres of society, the economic crises of recent years and the economic and social restructuring caused a change towards many processes and phenomena, which until now remained outside the purview of psychologists. What used to be considered a deviation from the norm, a product of capitalism, is now considered an important and integral component in a person's life.

More attention has been paid to such concepts as «self-development», «self-educa-

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tion», «personal success,» «success in business and professional activities», «career». In many approaches, schools and branches of psychology we can find descriptions of phenomena that serve as the regulator of the individual's actions, perception and comprehension of reality and himself by the person, self-determination in society, building of their personality, way of life, including professional development and career advancement. In contemporary Russian society the aims of education and, consequently, the criteria of its effectiveness have been changed. The main aim of education became the development of personality and realization of its unique human capabilities (Handzic M. 2016; Noe R., Noe A., Bachuber J., 1990). The criterion for evaluating the effectiveness of education is the success of professional activity.

In connection with it the phenomenon of career has become the object of study in many foreign and domestic studies. Foreign research investigates mainly the factors in-

fluencing the choice and career development, motivation and successful realization (Noe R., Noe A., Bachuber J., 1990; Pankratova I. A., Anikina O. V., 2015).

In Russian psychology the researches in the field of professional career concern mainly the peculiarities of professionals, the content and the dynamics of career, relationships of career success, professional training, development of professional self-consciousness (Rogova E. E., Pankratova I.A., 2012; Pankratova I. A., Anikina O. V., 2015; Rogov E. I., 2014; Sheveleva A. M., Ivanova A. I., 2013; Klimov E. A., 1996).

Thus the idea of own career is a form of professional future management, at the same time ideas about the future planned professional and career way were studied relatively little. Professional development and career advancement of the personality can be managed by the society, and by the man himself, from the inside, through the system of psychic phenomena that serve as the regulator of the behavior and actions of the personality. Such phenomena is "the image of the career".

Although the researchers agree that the image of a career is not static and changes during the acquisition of the new experience, however, there is still no special psychological researches focused on the experimental study of the specific peculiarities of the image of career. The actuality of this study is determined by the consideration of the regularities of the specific way of career on the basis of synthesis of theoretical and experimental works of Russian and foreign researchers.

The image of a career is a way of regulation of life and professional activity of the personality through goal setting, motive formation, sense formation, stimulation and mobilization. The image of the career performs the functions of emotional reinforcement and planning career development.

Despite the undoubted actuality of the study of the career image there is no definite view on the structure and content of this phenomenon in psychological science. The aim of our work is to study the structure of the image of the career (for example, government officials), and to study peculiarities of changes in the content of the image at different stages of career growth of the personality.

2. THE CONTENT OF CAREER IMAGE STRUCTURE

2.1. The career image as psychological phenomenon

The term "career image" and related concepts are studied extensively in the last ten years. With this term such definitions as "professional component of the image of the world", "career planning", "the ideals of a professional career", "the dynamics of ideas about the professional career", "the image career way" are related.

In the basis of the study of the formation of ideas about their own career is the research of E. A. Klimov about professional component of the image of the world. E. A. Klimov says that the internal (implicit) models, images of "the connected world whole", real holistic world, essentially and not accidentally differ in connection with the types of professions distinguished, for example, by the characteristics of the subject system, which the man deals with as a subject of activity. The idea about professional relativity of an image of the world is a particular expression of the idea of group and individual relativity of displaying objective and subjective reality by different people (Hanina I. B., 1990).

In the works of E. A. Klimov it is said that a person belonging to a particular profession has his own image of the world and world perception. Thus, the activity performed by the person influences the ideas about his future.

I. B. Hanina, focusing on the formation of the subjective model of the world, suggests that among the professionals this formation occurs in the interaction with a specific object of labour and depends on the method of participation in distributed work; type of labour communication; orientation of educational influence during learning of profession (Sheveleva A. M., 2013).

The professional component of the image of the world is formed in the process of teaching and training. The professional component of the image of the world is the system of relations of man to the objective reality through the prism of his profession as complex manifestation and at the same time reflection regulator gained in the process of life.

Analyzing the problem of ideas about their own career of students of psychology A. M. Sheveleva came to its learning through the

prism of the emotional aspect of the term of career ideals. She gives the following definition to career ideal - it is ideas of the subject about the best desirable career for him which reveals in the following content: professional activity, professional position, realization of vocation, lifestyle, enrichment of experience, professional way or achievements and social recognition (Kirt, N. L., 2000).

In the works of N. L. Kirt the dynamics of ideas about the professional career of the educational psychologists in the process of professional self-determination was analyzed. There were studied the ideas about profession on the basis of which a person determines the prospects of his professional movement, with ideas about career considered not as a static phenomenon but as a dynamic and changing in time process (Lotova I. P., 2001).

Ideas about career are are to change under the influence of social (political, economic changes in society) and psychological (self-esteem, level of claims, motivation, knowledge, etc.) factors on different stages of training and activity.

The most full in the sphere of the ideas about professional career is the research of career image by I. P. Lotova. Analyzing the image of career way in her study she says that career image is "the integral of actual state of the personality, way of her change and last state". However, such definitions as "the image of the career" and "the image of career way" are synonymous in her work. Although we believe that the career image is a broader and more integrated term, and includes the image of a career way (Moll E. G., 2012).

A number of authors - I. P. Lotova., E. G. Moll, - emphasize the importance of career planning, seeing it as a search for ways of personal improvement to achieve specific goals taking into account individual abilities and limitations (Lotova I. P., 2001).

Conscious planning of professional career, self-management are psychological basis of personality self-realization in the sphere of professional activity. The content and specifics of the profession itself sets a very special trajectory of the career orientation of a person. At the same time professional ideas and ideas about career are rarely the subject of special study.

In their turn professional ideas affect career advancement. Career advancement of the personality can be controlled by society, and by man himself, from the inside, through the system of psychic phenomena that serve as the regulator of the behavior and actions of the personality. Such definitions as "image of the world of the professional", "career ideal", "image of career way", "career image" and others correspond to these phenomena.

To study the career image and the mechanisms of its formation acmeological and program-targeted approach to career planning was applied in psychology.

Program-targeted approach to career planning supposes the formulation of goals system and determination of the concrete activities providing the achievement of these goals by the most effective ways. The function of such planning is the optimization of career and the intensification of personal development. The product of career planning is the image of the future career and means of its creation. The image of the future career performs the function of the regulation of career creation. Its content includes the stages of a career, means, and deadlines for their realization. Based on the position that "external reasons act through internal conditions" we can suppose that "interior condition" of the effective career growth is career planning.

From the point of view of acmeological approach a system forming factor of the image of the future career is the final position, the purpose of personal and professional development. It is determined by the age of the state employee, speed of promotion, the position, the number of steps passed during management way. The final goal defines the spatial - temporal characteristics of the image of the future career way. The higher planned final level of hierarchy of the state service system assumes a greater number of planned steps, a later age of going to the last position - the increase of the planned time interval.

Content of career image can be an idea of the most proper profession. One of the important factors affecting the content and characteristics of the career image is age. It determines the content of the image - goals, factors of satisfaction with the career, and also stability and variability, the degree of elaboration of means of image achievement, reality. For example, E.G. Moll, analyzing managers in her study, says that young leaders (under 35 years) include career in the image the plans covering longer time periods and most of the remaining managerial way than the plans of middle management (36 - 45 years) and senior (46 - 55 years).

The content and characteristics of the professional career image are influenced by the social and psychological and personal characteristics of the subjects: sex-role and

professional role expectations and identity, type of the personality and correspondence to his social environment, values orientation, peculiarities of motivational-requirement sphere, abilities, intentional characteristics, I-concept, peculiarities self-assessment, the level of internality, self-confidence and anxiety, character peculiarities, peculiarities of cognitive sphere and self-consciousness, awareness. Also the ideals are affected by individual characteristics of the subjects: genetic factors, age and stage of life, gender, physiological characteristics.

2.2. The structure of the career image

After analyzing the researches of domestic and foreign authors we have identified the following structural components of the career image:

The duration of the position number means the amount of planned steps (positions), levels of management hierarchy, refers to the spatial characteristics.

Time or temporal characteristics of the career image are determined by age boundaries of planning.

The sequence as a characteristic of the image of the future is determined by the presence of the image of all levels of the management hierarchy within the space, absence of repetitions or omissions. The empirical indicator of sequence violation is the ratio of the number of missed or repeated levels to the length of planning position number.

Duration as a characteristic of the image of the future management way is expressed by the time of the supposed stay on separate position levels. According to I. P . Lotova this time on average is 2-3 years (Pankratova I. A., Anikina O. V., 2015).

Level characteristics of the planned career are a quality content of position number. Drawing an analogy, they can be compared with modality characteristics of sensory-perceptual images.

Intensity - the amount of movement per time unit, the speed of advancement.

Diversity - supposed changes in the sphere of professional activity, system environment.

Accuracy - conformity of the model of really existing hierarchy to the state service system. An indicator of the accuracy is the presence or absence of errors, of various kinds of distortions. An empirical indicator is the ratio of the number of errors (distortions) to the length of the position number.

Adequacy - compliance of the image characteristics to the probable structure of positions substitution. In this context, important is the question of the quality of the applied probable models of substitution. The development of such models is extremely important for personnel services.

Flexibility - the variability of the image as you pass the managerial way in connection with the qualitative dimension of the environment system or internal conditions. It is variability of the model in the course of a professional career in connection with the qualitative changes of the system environment, the organizational or internal conditions. This feature supposes moving the hierarchy ladder not only vertically, but also horizontally, and the also the flexibility of individual career strategy and tactics (Rogov E. I., 2014).

The nearest zone – the characteristic of the nearest planned development of professional career, the time until the start of the first job promotion and its content at the moment of the study. This relationship reflects the relation of confidence degree of state employee in the accuracy of forecast in normal and extreme (high uncertainty level) conditions. The higher the recognition level of conditions of high uncertainty in forecasting that is not connected with career development, the greater the time interval till the nearest supposed job promotion.

The integrity of the image - the presence of the final goal of career development. It can change individual elements (steps) and the ratio between them, but the overall structure and final goal are unchanged. It is taken into account the possibility of loss of the some position levels or the appearance of new ones at overall stable focus on a certain position level.

Involvement in professional activity. This characteristic is associated with the regulatory function of the image and reflects the degree of influence of professional career plan on personality, i.e. how the plan of professional career is realized in personal and professional development.

The constancy - stability, the preservation of the image under the influence of separate factors, including time. The constancy of the image may be characterized by differences between the time of readiness for the entry into a new position (level of the management system hierarchy) and expected (subjectively probable) time of appointment.

The image of a career is a broader concept than the image of a career way. Unlike the image of a career way, a career image is the most integrated category, because it includes an emotional component, bright specific goal and ways of its achievement and can be used to assess what

affects a person in building his career and what determines his success in the professional career.

Thus the elements of the career image can be divided into three structural components: structural, informative and emotional-evaluative. As structural units of the career image, we consider the beginning of a career way; career way itself; the end of a career way.

The content of the career image includes as the main units: factors influencing the successful passage of career way and adequacy of the career image.

As emotional and evaluative component of the career image we consider the emotional attitude of the respondent to the beginning of a career, the end of a career and to a career way.

Under the career image we mean the result of mental activity, which is an idea of the personality about own career including career goal, ways of its achievement and having a rich emotional color.

The image of a career is a way of regulation of life and professional activity of the personality through goal setting, motives formation, sense formation, stimulation and mobilization. The image of the career performs the functions of emotional reinforcement and planning of career development. It is the regulator of life plans, professional development and building of the career.

3. MATERIALS AND METHODS

An empirical study of the structure of the career image was conducted on the example of state employees. The choice of testees is determined by the fact that because of a number of specific aspects of activities that are socially valued, the bureaucracy is a permanent object of scientific research, at that the requirements imposed on the officials are universal for any country in the world. The testees in our study were state employees at different stages of professional development. The total sample amounted to 635 persons, among them 388 women and girls and 247 boys and men. An empirical study was conducted on the basis of the departments "State and municipal management" (students of the 1-st and 5-th courses) and the "Training of state employees" of South Russian Institute of management of Russian Academy of national economy and state service under the President of the Russian Federation.

1. Group "A" (potential state civil employees) – *the stage of early professionalization* – students of the first course - 164 persons at the age of 17-19 years.

2. Group "B" (state civil employees before entry on the position) – *the stage of education finishing* - students of the fifth course - 160 persons at the age of 21-23 years.

3. Group "C" (state employees working in the state service from 2 till 5 years) – *the stage of initial professional adaptation* - 147 persons at the age of 22-35 years.

4. Group "D" (state employees working in the state service from 10 till 20 years) – *the stage of professional skill* - 164 persons at the age 35-50 years.

To study the peculiarities of the career image of state employees we carried out an empirical research, the aim of which was to reveal the specific content of the structural, informative and emotional-evaluative components of the career image of state employees at different stages of professional formation.

The choice of research methods was based on the principles of comprehensiveness, objectivity and dynamism of studying the psychological peculiarities of the personality.

For that purpose we have chosen the following methods and techniques for research:

- structural component: the author's technique "Career schedule";
- informative component: a projective method "Drawing of the career", the questionnaire of E. Shane "Anchors of career"; the questionnaire of E. G. Moll "Career goals"; method of E. G. Mogilevkin "Factors of career advancement";
- emotional-evaluative component: a projective method "Drawing of the career".

These methods and techniques allow to study the structure and main components of career image and their content at different stages of professional development of the personality.

4. RESULTS

We have carried out the analysis of psychological peculiarities of the career image in the process of professional development of state employees.

4.1. The analysis of the structural component of the career image in the process of professional development of state civil employees

In the process of professional development the idea about the average age of starting a career changes in the direction of reduction.

If on the first stage of professional development the age is 22.6 years, on the stage of professional skill it is 21 year. In our opinion, it is connected with the fact that in the first case the age of starting a career coincides with the age of graduation from the high educational establishment, which suggests that respondents suppose to begin their career immediately after graduation. In the second case, the age of starting a career coincides with the real age to start a career, that's why most testees indicated it.

We have found that the average age of the career peak indicated by the respondents is increased in the process of professional development of the personality (from 35 years on the first stage to 45 years on the last stage). The reference to such age limit on the first stage is due to the fact that this age is associated with full maturity, and indication of the age limit to 45 years at the last stage suggests that the observation of real careers in the state civil service and private experience have an impact on the shift of the border to a more realistic side.

The average number of planned positions indicated by the respondents also changes depending on what stage of professional development is the personality, which in our opinion is quite natural, since gaining professional experience and having worked for several years in the state service, the testees learn the career way more detailed. Thus, with the increase of the number of planned positions, the number of years spent in each position is reduced, because the total number of positions is increased (Table 1).

Table 1. The analysis of the structural component of the career image in the process of professional development of state civil employees

№	Sub group	The average age to start a career	The average age of career peak	The average amount of stages	The average amount of years in the position
1	A	22,6	35,3	3,9	10,2
2	B	22,4	40	4,3	14,4
3	C	20,6	41	5,1	12,1
4	D	21	45	6,2	7,5

It should be noted that in the process of personal professional development the number of respondents that adequately describe the positions of their career way significantly increase (Table 2). This is due to the fact that in the process of professional development the personality not only develops professional skills, but also learns the details of career growth in the organization.

Table 2. Analysis of conformity of the career image to the reality

№	Sub group	Conformity, in % from the number of the testees in the sample		
		Conforms	Partially conforms	Doesn't conform
1	A	0	4	96
2	B	24	11	65
3	C	40	7	53
4	D	57	13	30

If at the first stage, practically none of the respondents could correctly indicate the positions planned for substitution, at the last stage of personal professional development 57% of the testees indicated the positions correctly. It is obvious that the respondents at the first stage of professional development of the personality poorly represent actual official structure of the government, however, with the gaining of their own experience in the state service the idea about their own career becomes clear and adequate.

The analysis of drawings «Career schedule» showed that the nature of the drawing changes depending on the professional experience received by the testees. The drawing «vertical» dominates in groups «A», «C», «D». In group «D» a drawing of a career schedule «plateau» dominates, i.e. the fifth-year students believe that when you build a career in the state civil service the growth is possible only till a certain position, after which the «career stagnation» comes. It is connected with the fact that during practical training the respondents have an opinion about such career development. Schedule «vertical» indicates that employees with any professional experience and respondents who have little understanding about the career of state employees believe that it is possible to make a rapid career in this professional sphere.

4.2. The analysis of the informative component of the career image in the process of professional development of state civil employees

We have identified a number of features in the content of the drawings. The images of "man" and "the living world" are depicted most frequently. However, the plot of a man is more common in the drawings of the testees of the subgroup "A" (first year students), and in the other three subgroups the image "the world" dominates, the higher the stage of professional development of personality, the image of the "world" is more common (p=0.004)

Only the drawings of the testees of the subgroup "D" have the plots of "state symbols" and "diploma", these stories are connected with the state service and identified with the end of the career in the minds of officials.

After analyzing the size of drawings we can note higher indicators when evaluating the final stage of career and career way for all respondents. The importance of the end of the career increases in the process of professional development, but not significantly - 1.7 times. This is due to the fact that the closer the end of a career, the more important it becomes for the personality. As has been noted a slightly overestimated relation to the importance of a career way is observed in all subgroups, but it is mostly overestimated in the subgroup "B".

It should be noted that there is strongly overestimated evaluation of career starting is observed in the subgroup "B". We explain it by the fact that the testees will soon start their career and this event has a great importance for them, while in the remaining three subgroups a neutral attitude to the career starting dominate, due to the fact that for the subgroups "A" the beginning of a career will not come in the near future and for subgroups "C" and "D" it has already started.

The analysis of possible career goals showed that the most significant for all groups of the testees are the financial goals (Table 3).

Table 3. The peculiarities of career goals in the process of professional development

№	Career goals	A	B	C	D
1	Financial goals	1	1	1	1
2	Benefit to others, Russia	2	2	5	2
3	Self-realization	8	3	2	3
4	Respect	4	8	3	3
5	Success	4	5	5	3
6	Power	6	8	5	3
7	Freedom, independence, autonomy	3	6	-	-
8	The welfare of the family	4	8	-	5
9	Rank	6	9	4	5
10	Stability	-	4	4	4
11	Professionalism	-	9	5	3
12	Satisfaction with the work	5	8	3	-
13	Recognition	7	9	4	-
14	Self-improvement	8	9	3	5
15	Authority	-	8	4	-
16	Movement	5	-	-	-
17	Composure	7	-	-	5
18	Relations	8	7	-	-
19	Self-satisfaction	8	8	3	-
20	Own business	8	8	-	-
21	Prestige	8	9	-	-
22	Self-respect	8	9	-	-
23	Self-knowledge	8	-	-	5
24	Experience	-	9	3	-
25	Fame	-	9	-	5
26	Activity	8	-	-	-
27	Confidence	8	-	-	-
28	Happiness	8	-	-	-
29	Development	-	9	-	-

The most significant differences were identified between the group "C" and the other groups (p=0.003) in relation to career goal "benefit to others". While in the three subgroups ("A", "B", "D"), this career goal is second, in the subgroup "C" it goes to fifth place. This is due to the fact that the respondents are just starting their careers and actual for them are goals oriented on the achievement of personal success, because the goal of self-realization is on the second place.

We refer career orientation to the content component of the career image. The analysis

of the questionnaire "Anchor of the career" allowed to identify a number of characteristics (Table 4).

Table 4. The peculiarities of career orientation in the process of professional development

№	Career orienta-tions	A	B	C	D
1	Stability of the place of the work	1	1	1	2
2	Service	2	5	5	1
3	Management	3	3	3	6
5	Integration of life styles	4	4	4	3
6	Autonomy	7	6	6	4
7	Challenge	5	7	7	5
8	Business	6	2	2	9
9	Professional competency	8	8	8	7
10	Stability of resi-dence	9	9	9	8

Data from Table 4 allow to understand that despite the changes in career orientations of the respondents occurring in the process of professional development, the dominant career orientation for the three subgroups ("A", "B", "C") is "stability of the place of work". This orientation is possibly connected with a desire to have guaranteed employment, social benefits and support after retirement and reflects the paternalistic setting inherent for many working people - "organization as a family".

However, the most important career orientation for state employees who are at the stage of professional skills is "service". Taking into account that professional activity of a state employee is directed primarily to the service, the respondents when choosing a future profession of a state employee orient on service to society and the state.

The least significant career orientation for all subgroups is orientation on the "stability of residence".

We also refer the factors influencing the successful career advancement to the informative aspects of the career image (Table 5).

Table 5. The peculiarities of distribution of the factors influencing the successful career advancement in the process of professional development

№	The factors influencing the successful career advancement	A	B	C	D
1	Intellect	1	1	1	4
2	Money	7	4	6	6
3	Good education	5	6	3	2
4	Attractive appearance	8	9	8	0
5	Family	8	11	9	10
6	Wittiness	9	10	10	-
7	Professionalism	2	3	2	1
8	Patience	8	8	6	8
9	Relations	7	4	6	9
10	A close relationship with the boss	8	7	10	-
11	Experience	6	8	7	7
12	Persistence	4	5	5	3
13	Good luck	3	2	4	5

According to the respondents who are on the first three stages of professional development of the personality, a factor that has the greatest impact on the career is "intellect", while the state employees who are at the stage of professional skill consider "professionalism" a leading factor, in subgroups "A" and "C" this factor occupies the second place, and in the subgroup "B" - the third, due to the fact that the testees attach greater importance to intellectual abilities than to skills and abilities obtained in the course of professional activity.

4.3. The analysis of the emotional-evaluative component of the career image in the process of professional development of state civil employees

For the analysis of emotional-evaluative component we used the author's technique "Drawing of the career". The analysis of the emotional-evaluative component of the career image in the process of professional development allowed to reveal a number of peculiarities.

The analysis of the emotional-evaluative component showed that most of the testees

have dominating neutral attitude towards the start of their career. But the testees who are at the stage of completion of professional education are characterized by a negative attitude to the start of the career (p=0,0035). We believe this is due to the fact that at the stage of career finish the personality starts to miss the past, and also feels competition from the "young" counterparts especially acute. To the peak of the career a positive attitude is dominated in this group.

5. CONCLUSIONS

Studying some peculiarities of the structure of the career image at different career stages of professional development, we have conducted extensive theoretical analysis of the problem. We came to the following conclusions:

1. The image of a career is a way of regulation of life and professional activity of the personality through goal setting, motive formation, sense formation, stimulation and mobilization. The image of the career performs the functions of emotional reinforcement and planning of career development. It is the regulator of life plans, professional development and building the career.

2. We found out that the content of the career image components changes depending on what stage of professional development the personality is. The structural component in the process of professional development varies from amorphous and ill-structured at the first stage of professional development to a clear and specific at the last stage of professional development. The career trajectory changes as follows: at the first, third and fourth stages of professional development the most characteristic is the graph of a career "vertical", and at the second stage it is "plateau".

As to the content of career image we can note that the most common for all stages of career development is the dominance of financial goals. The majority of respondents in the first three sub-groups consider a factor that has the greatest impact on a career - "the intellect", at the same time, the testees who are at the stage of professional skill *consider "professionalism" a leading factor*. In the first three sub-groups "stability of the place of the work" has the priority, however *for state employees who are at the stage of professional skills the most important career orientation is "service"*.

Emotional-evaluative component of the career image is maximally differentiated at the second stage of professional development, at all other stages the career image has a common neutral color.

The results of the research and its empirical tools can be used by practical psychologists, teachers of high school and personnel employees for revealing the peculiarities of the career image at different stages of professional development; for identifying the possible difficulties which appear when building and passing the career; for applying in the practice of psychological consulting for career development.

The prospects of further work are defined. To continue the research of the career image the following is necessary: the extension of testees sample, selection of the testees from different fields of professional activity; carrying out experimental researches aimed to study the influence of the career image on the professional and career success of the personality.

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PECULIARITIES OF EDUCATIONAL ORIENTATION OF TEENAGERS WITH DIFFERENT TYPES OF INTERPERSONAL PERCEPTION OF THE GROUP

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A B S T R A C T

In this research the peculiarities of educational orientation in the course of learning at the selection of 86 teenagers depending on perception of the educational group by them have been studied. Reliability of the research has been provided with the use of the relevant techniques: "Interpersonal perception in the group" (Ilyin E. P., 2002) "Orientation on knowledge acquisition" and "Orientation on a grade" (Ilyin E. P., 2002). It has been specified that the teenagers with individualistic, collectivistic and pragmatical types of interpersonal perception of the group are oriented to different extents on a grade and knowledge in the course of learning. The provided data can be used by school psychologists, counseling psychologists, in aid of teachers and parents.

1. INTRODUCTION

The knowledge of a person by a person is one of the topical issues of social psychology. In the theoretical terms its development is closely connected with the problems of communication, activities, personality, consciousness, self-consciousness, etc. Interpersonal knowledge serves as the necessary attribute of labor and educational activity, in fact, how people reflect and interpret character and behavior, as well as estimate the personality of each other, the type of their interaction and the results of their joint activities depend in many respects (Slinkova V. E., 2007).

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In general three directions of researches are distinguished in the area of perception depending on what is the object of perception (other person, group, wider social community). "Social self-perception", the process and the result of the reflexive part of interpersonal interaction also belong to the same range of problems. The structure of interpersonal perception is described as three-component. It includes the object, the subject and the process itself which should be considered in the context of the specific situation. According to the special researches upon studying of the situation of interpersonal perception the most important factor is joint activity, especially goals, subject-matter and forms of organization of this activity (Pavlova T., 2014). In the scientific literature it is underlined again and again that there are peculiarities of perception and understanding of other people and themselves by teenagers with different level of interpersonal relations (Balavadze T. Sh., 2009), regularities of determination of the processes of interpersonal perception taking into account the real group dynamics in the conditions of isolation (Vinokhodova A. G., 1997), interrelation of professional tendencies

and professional interests with the type of the group perception of teenagers (Zholudeva M. V., Zholudeva S. V., 2016), age dynamics of precision and adequacy of interpersonal perception (Samekin A. S., 2011), peculiarities of formation of interpersonal perception as condition of teenagers' communication improvement (Berezina A. V., 2003), etc.

The main new feature appearing in a teenager's psychology in comparison with a child of the primary school age is higher level of self-consciousness. Along with it there is well-defined demand to evaluate correctly and use the available opportunities, form and develop abilities, bringing them to the level where they are in adults. At this age teenagers become more sensitive to the opinion of the people of their age and adults. It is supposed that the person knows himself through communication with other people therefore development of interpersonal perception is important not only in itself, but also it is necessary for formation of self-consciousness and development of reasonable self-esteem.

Communication with the people of the same age becomes the leading activity of teenage years. Just at the beginning of teenage years communication activities, conscious testing with own relations with other people (search of friends, getting into an argument, conflicts and reconciliations, change of groups of friends) are allocated into a rather independent area of life. The main requirement of the period - to find your own place in the society, to be "significant" - are realized in the community of the people of the same age. At the same time a teenager continues to remain a pupil; educational activities keep the relevance. Therefore the research dedicated to the peculiarities of educational orientation of teenagers with different types of interpersonal perception of the group is especially urgent.

2. MATERIALS AND METHODS

Founding on theoretical underpinning of the set up problem, we have studied the peculiarities of educational orientation of teenagers with different types of interpersonal perception of the group. The hypothesis of the research has acted as presumption that there are peculiarities of educational orientation of teenagers with different types of interpersonal perception of the group.

As empirical tasks, we have put forward the following:

1. To define the type of interpersonal perception of the group of teenagers;

2. To describe the peculiarities of orientation on a grade of teenagers with different types of interpersonal perception of the group;

3. To describe the peculiarities of orientation on knowledge of teenagers with different types of interpersonal perception of the group.

The pupils-teenagers of the 9th form have acted as respondents in the research. In total 86 persons have taken part in the research. The research has been conducted at the Municipal Educational Institution of Secondary Education "School No. 75" of Rostov-on-Don.

At the first stage of the diagnostic testing we have used the technique "Interpersonal perception in the group" T. Leary, G. Leforge, R. Sazek (Ilyin E. P., 2011) allowing to reveal three possible "types" of perception by the individual of the group. Upon that the role of the group in the individual activity of the percipient acts as an indicator of the perception type.

At the second stage of the diagnostic testing we have used 2 techniques: "Orientation on knowledge acquisition" and "Orientation on a grade" put forward by E. P. Ilyin and N. A. Kurdyukova (Ilyin E. P., 2002). In the course of the technique realization "Orientation on knowledge acquisition" the degree of demand manifestation on knowledge acquisition has been revealed. The technique results "Orientation on a grade" have allowed revealing the degree of demand manifestation of teenagers for getting a grade.

At the third stage of the empirical research, the results received by us, have undergone the quantitative processing and the qualitative analysis according to the following scheme:

1. According to the technique "Interpersonal perception in the group" T. Leary, G. Leforge, R. Sazek, the dominating type of interpersonal perception of teenagers who have taken part in the research (collectivistic, pragmatical, individualistic) has been defined (Ilyin E. P., 2011). For proving of the put forward hypothesis and convenience of description of the obtained data according to the results of the technique the teenagers have been conditionally divided into three groups (according to the type of perception by the individual of the group): Group 1, Group 2 and Group 3:

Group 1 – the teenagers with individualistic type of perception;

Group 2 – the teenagers with pragmatical type of perception;

Group 3 – the teenagers with collectiv-

istic type of perception.

Processing, analysis and interpretation of the obtained empirical data have been carried out according to the distinguished groups.

2. According to the techniques of E. P. Ilyin and N. A. Kurdyukova "Orientation on knowledge acquisition" and "Orientation on a grade" the expressiveness degree of motivation on knowledge and a grade have been determined (Ilyin E. P., 2002).

At the fourth stage of our research for statistical check of the put forward hypothesis Mann-Whitney U-Test and Kruskal-Wallis Test have been used, by means of which the distinctions in orientation on knowledge or a grade of teenagers with different types of perception of the group have been specified.

Also Spearmen's rank-order correlation has been used by means of which the significant correlation pleiades between the data of the techniques "Interpersonal perception in the group" (Ilyin E. P., 2011) and the techniques of E. P. Ilyin and N. A. Kurdyukova "Orientation on knowledge acquisition" and "Orientation on a grade" (Ilyin E. P., 2002) in Groups 1, 2, 3 have been revealed.

3. RESULTS

Studying of perception by the teenagers of the group has shown that most of the teenage respondents (40.7 %) are with individualistic type of perception of the group. Such teenagers perceive the group as hindrance of their activities or treat it neutrally. The group has not been represented as independent value for them. It is revealed in evading from joint forms of activities, in preference of individual work, in restriction of contacts.

Thirty-six percent of teenagers are with collectivistic type of perception of the group. They perceive the group as independent value. The problems of the group and its separate members come to the foreground for them, interest in both success of each member of the group, and the group in general, aspirations to make your own contribution to the group activities is observed. The need for collective forms of work is developed.

The smallest number of teenagers is with pragmatical type of perception of the group (23.3%). Such teenagers perceive the group as the means promoting achievement of these or those individual goals. Under that the group is perceived and estimated from the point of view of its "usefulness" for the individual. The preference is given to more competent members of the group capable to render assistance, to undertake the solution of a complex problem or to be a source of the necessary information.

Further according to the put forward objectives we have divided all teenagers into the previously described groups, depending on the type of perception of the group.

For checking of justice and correctness of separation of the teenagers into the groups we have carried out the statistical analysis by means of nonparametric Kruskal-Wallis H-Test. The obtained results are provided in Table 1. So, significant distinctions have been revealed in all scales that testifies about rightfulness of separation of the teenagers into the groups.

Table 1. Test Statistics (a, b) Types of perception of the group

	Individualistic	Collectivistic	Pragmatical
Chi-Square	51.947	56.068	46.259
df	2	2	2
Asymp. Sig.	0.000	0.000	0.000

    a Kruskal Wallis Test
    b Grouping Variable: Group

Thus, the analysis of interpersonal perception by teenagers of the group has shown that for the teenagers who have taken part in the research to perceive the group as the means promoting achievement of these or those individual goals is peculiar in a lesser extent. They are more aimed at individual work, and joint activities and the group in general are not perceived as value for them. And most often, on the contrary, it is perceived as hindrance of own activities.

For research of educational orientation we have carried out the analysis of the data on orientation on a grade and orientation on knowledge. Description and analysis are presented according to the previously distinguished groups meeting the goals and the objectives of our research.

In Figure 1 the results of motivation of teenagers on knowledge acquisition are provided. So, in most of teenagers of all groups (65.5 %, 68 % and 75 %) the average level of motivation on knowledge acquisition has been revealed. They feel mental and physical involvement in educational activities, in what is currently doing. They have partial concentration of attention, thoughts and feelings in practice. They do not always know precisely what to do at this or that moment of work, do not always clearly realize its goals and objectives, they are characterized by partial subordination to the requirements going from the

activities themselves; they partially realize the fact, how well, how successfully they do their work, they do not always give a clear and specific feedback on the activities.
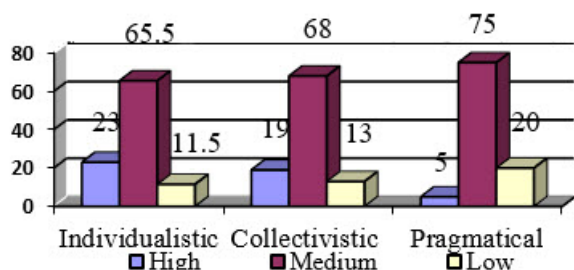
Figure 1. Level of orientation of teenagers on knowledge acquisition (in %)

Twenty-three percent of teenagers with individualistic type, 19 % with collectivistic type and 5 % with pragmatical type of the group perception have high level of motivation on knowledge acquisition. Such teenagers look for change of impressions, new information, feel need for the process of knowledge, goal-oriented activity. If such teenagers aspire to special area of knowledge, then on this basis their interests and addictions arise, develop, and become stronger. Irrespective of the problems of adaptation to a definite situation their informative requirement is oriented, first of all, to the process of cognition. "Unselfishness" of the informative requirement, its orientation mainly to the process, but not to the result - the most important characteristic of teenagers with high level of orientation on knowledge acquisition.

Eleven and a half percent of teenagers with individualistic type, 13 % with collectivistic type and 20 % with pragmatical type of the group perception have been revealed with low level of orientation on knowledge acquisition. Such teenagers are characterized by unstable informative requirement, their interests often change. They do not use the efforts for solution of the stated goal and objectives, adapt to a situation more. They are not inclined to analyze the failure reasons in their activities.

Thus, the average level of orientation on knowledge acquisition has been revealed approximately in an equal number of teenagers of all groups. High level has been detected in the majority of teenagers of individualistic type of the group perception, and low level – in teenagers of pragmatical type.

Further for detection of significant distinctions in orientation on knowledge acquisition we have applied non-parametric Mann-Whitney U-Test. We have analyzed the distinctions in pairs in the groups of teenagers with different types of the group perception. So, significant distinctions of orientation on knowledge acquisition have been revealed in teenagers of individualistic and pragmatical types of the group perception where U=167.000, at r=0.006. The average rank in the group of teenagers of individualistic type is equal to 30.40 and teenagers of pragmatical type – 21.80. These distinctions indicate that the teenagers with individualistic perception of the group the orientation on knowledge acquisition is higher.

In Figure 2 the results of orientation on a grade of teenagers are presented. So, least of teenagers have been revealed with high level of orientation on a grade in all groups. In the group with individualistic perception – 8.5%, with collectivistic perception – 6.55, and in the group with pragmatical perception teenagers with high level have not been revealed. It shows that these teenagers are focused to compare the grades with the grades of their schoolmates, they remember when they get the poor grades, worry about the results of the forthcoming tests very much, and their mood often depends on the progress at school.

The average level of orientation on a grade has been revealed in most of teenagers of all groups. So, 93.5% of teenagers with collectivistic, 65.5% with individualistic, and 45% with pragmatical group perception follow how often they are called to the blackboard by the teacher, do their best to prepare for the next lessons even if they were asked at the previous lesson and experience some anxiety in anticipation of the testing.

Most of teenagers with low level of orientation on a grade have been revealed in the group with pragmatical perception – 55 %. In the group with individualistic perception – 26 %, and in the group with collectivistic perception the teenagers with low level of motivation on a grade have not been revealed. These teenagers do not worry about academic progress at all; they aren't upset when receiving bad grades, their mood doesn't depend on their learning.

Figure 2. Level of orientation of teenagers on a grade (in %)

Thus, the average level of orientation on a grade has been revealed in most of teenagers with collectivistic and individualistic types of the group perception. High level of orientation on a grade has been revealed in most of teenagers of individualistic type, and low – in teenagers of pragmatical type.

Further we have applied the nonparametric Kruskal-Wallis H-Test for detection of significant distinctions in orientation on a grade. We have analyzed distinctions at the same time in all groups of teenagers with different types of the group perception. So, significant distinctions of orientation on a grade have been revealed in teenagers of all types of the group perception where N=6.730, at r=0.025. The average rank in the group of teenagers of individualistic type is equal to 43.44, collectivistic type – 46.68, and pragmatical type – 29.17. These distinctions indicate that teenagers of collectivistic type of the group perception are guided by grades most of all, and teenagers of pragmatical type - to a lesser extent.

We have carried out the correlation analysis for specification of the peculiarities of educational orientation in teenagers with different types of the group perception. Significant correlation relationships between orientation on knowledge acquisition, orientation on a grade and types of the group perception revealed by means of Spearmen's rank-order correlation are reflected in Table 2.

Table 2. Nonparametric Correlations of orientation on a grade and orientation on knowledge with type of the group perception in teenagers

		Individualistic	Pragmatical
Orientation on knowledge acquisition	Correlation Coefficient	508(**)	-.596(**)
	Sig. (2-tailed)	0,000	0.000
	N	86	86
Orientation on a grade	Correlation Coefficient		.355(**)
	Sig. (2-tailed)		.001
	N		86

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

It has been discovered that teenagers with individualistic type of the group perception are aimed at knowledge acquisition where r=508, at p=0.000. So, the teenagers who perceive the group as hindrance of their activities, and the group has not been represented as independent value for them, are oriented to knowledge acquisition to a large extent, they have an expressed "unselfish" informative requirement, and they are aimed at the process of knowledge to a large extent.

The teenagers of pragmatical type who perceive the group as the means promoting achievement of these or those individual goals and estimate it from the point of view of "usefulness" for them and it is a source for the necessary information, they aren't aimed at knowledge acquisition where r=-596, at p=0.000, and are focused on a grade where r=355, at p=0.001.

4. DISCUSSION

The comparative analysis of orientation on knowledge acquisition in teenagers with different types of the group perception has shown that

- in teenagers with individualistic type of the group perception orientation on knowledge acquisition is higher than in teenagers of other groups. They are characterized by "unselfish" informative requirement which is mainly focused on the process, but not on the result. They look for the change of impressions, new information, feel need for the process of knowledge and goal-oriented activity;

- in teenagers with pragmatical perception of the group orientation on knowledge acquisition is expressed least of all. They aren't interested in new educational knowledge, they don't analyze failures in educational activity, and their interests are inconsistent and unstable;

- in teenagers with collectivistic perception of the group the level of orientation on knowledge acquisition is medium. They do not always know precisely what to do at this or that moment of work, do not always clearly realize its goals and objectives, they are characterized by partial subordination to the requirements going from the activities themselves; they partially realize the fact, how well, how successfully they do their work, they do not always give a clear and specific feedback on the activities.
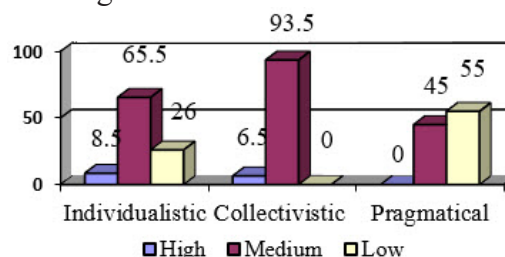
The comparative analysis of orientation on a grade in teenagers with different types of the group perception has shown that

- in teenagers with collectivistic type of the group perception orientation is higher at level, in comparison with other groups of teenagers. These teenagers are more oriented on assessment of their progress. They compare their educational progress with the progress of their schoolmates, worry about the obtained

bad grades, after getting of a bad grade their working capacity also decreases and in case of complete confidence that they will not be asked, they can come with unprepared material;

- in teenagers with pragmatical type of the group perception orientation on a grade is expressed least of all. These teenagers do not worry about academic progress at all, they aren't focused on reaction of the schoolmates concerning the progress, in most cases they don't worry concerning the forthcoming test and the teacher's interviewing;

- in teenagers with individualistic type of the group perception orientation on a grade is expressed at the medium level. These teenagers are oriented on a grade only in certain cases when the grade can be a condition for obtaining of some benefit.

5. CONCLUSIONS

Thus, the analysis of educational orientation in teenagers with different types the group perception has shown that orientation on the group, its values (collectivistic type) promotes the selective orientation on knowledge, and on a grade and depends on the values and the regulations of the group itself. The contrast between yourself and the group, orientation on individual types of activity (individualistic type) promotes the orientation on knowledge. And the use of the group in your own purposes (pragmatical type) develops the orientation on a grade and vice versa reduces the orientation on knowledge.

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TIME LOAD UPON STUDENTS IN PRIMARY EDUCATION

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ABSTRACT

Time load upon students is a central issue in the context of the overall load placed upon students. Most authors dealing with the issue of load upon students mainly approach this issue from the aspect of the time the students need to respond to the requirements posed by the school and otherwise concerning school. Such load is called time load. In our research, we investigated exactly this kind of time load placed upon students in the nine-year primary education in Macedonia. The main goal of our research was getting insight what is the students' time load like and how big it is.

1. INTRODUCTION

Searching through the literature whose object is time load upon students in modern schools, we got to the insight that this problem is mainly researched from the aspect of changes in the curriculums. (Bezinović, Ristić-Dedić, 2004).

This way, in example, Blank, Melaville and Shah, 2003 oriented their research towards the possibilities for reforming the curriculum and syllabus in schools. They paid special attention to the issues of schoolmasters and teachers' values, attitudes and activities regarding the scope and the quality of the curriculum, or, how solving these issues will influence the problem of time load upon students. (Blank, Melaville and Shah, 2003)

According to the research performed by Hara and Burke, 1998, conducted using door-to-door interviews, in 2002 in 8 countries of South-East Europe: Albania, Bosnia and Hercegovina, Kosovo, Macedonia, Montenegro, Serbia, Moldova and Romania, it was estab-

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lished that the communication i.e. the cooperation between the school representatives, on one hand, and the parents, on the other, was at a relatively low level. All this had contributed the schools, the local communities and the parents to lack information about students' time load (Hara and Burke, 1998).

In their research, Hara and Burke, 1998 point out that through the years a large number of data and proofs have accumulated about the positive correlation from the involvement of the local community and the parents in the process of education. Such cooperation between the local community, parents and educational institutions very often brings to the surface the problem of students' load, above all from the aspect of the changes in syllabuses (Hara and Burke, 1998).

Petar Bezinović and Zrinka Ristić-Dedić conducted a research trying, among else, to establish how big is students' load with school duties in their daily agenda. Beside having very loaded timetable, the students, according to the results from their research, must also much more prepare for following the lectures and doing homework (Bezinović, Ristić-Dedić, 2004).

2. MATERIALS AND METHODS

In our paper, we focused on the issue of time load, since we consider that the load in

its whole exceeds the scope of an individual investigation, moreover, of an investigation which approaches this issue only from one aspect. This study was conducted in the period from September 2014. until June 2015. among 945 participations, 405 students in primary education, 405 parents of this students and 135 teachers in primary education in Macedonia.

The norms obtained about time load upon students in our sample were compared with the theoretically given norms for optimal load upon students of each particular age. Using the rational comparison with the norms proposed by Lairda we established the factual situation concerning the time load placed upon students in our schools.

The results, the analysis of which follows, show how big the time load is upon students in primary education in the Republic of Macedonia, namely of those from sixth, seventh, eighth and ninth grade.

3. RESULTS
3.1. Time load upon students in sixth grade

According to the values given in Table 1, the arithmetic mean values and standard deviations, we can see that the dispersion of the results regarding students' time load in sixth grade ranges within the limits of 21 to 44 hours and 30 minutes.

These data clearly indicate the factual situation that a certain number of students in sixth grade, so as to satisfy the demands posed by the school, in their work spend double amount of time, and even more, than some other students in the same class.

Table 1. Time load upon students in the representative week for sixth grade; Distribution of frequencies by days, given in minutes and hours

Time load				
Day	Minutes	Hours	f0	ft
1	799–1106	–	0	0.61
2	1107–1414	18:27–23:33	3	7.56
3	1415–1722	23:33–28:42	43	33.88
4	1723–2030	28:42–33:49	56	55.83
5	2031–2338	33:49–38:58	26	33.88
6	2339–2646	38:58–44:06	12	7.56
7	2647–2954	–	0	0.61

$X=1877.6$ $\sigma=308$
$i=\sigma=308$ $\chi2=11.64$

The time load of 140 students from sixth grade, in 56 cases lies within the limits of 0.5 standard deviation (which is three times higher value than the one corresponding to the normal dispersion), i.e. it is in the range from 1723 minutes to 2030 minutes.

Table 2. Results (X and σ) by the success

	Success			
Results	5	4	3	2
X	2108	2007	1782	1580
σ	256	257	225	140

The calculated χ-square test shows that the distribution obtained is within the limits of the normal, i.e. it does not significantly deviate from the theoretic distribution which would correspond to our sample from the sixth grade classes of primary school.

If according to Lairda's theoretic norms, quoted in the Encyclopedic Dictionary of Pedagogy, the daily load upon students in sixth grade is 300 minutes, than we can make the claim that all the categories of students in sixth grade are burdened above the theoretic norms for the time load upon children at this age, or that the students in sixth grade are overloaded in the educational process.

3.2. Time load upon students in seventh grade

Regarding the data obtained by investigating students' time load from seventh grade classes, a significant overlap is characteristic between the results obtained in the investigation and the frequencies corresponding to the normal distribution, which preconditions concentration of the results around the arithmetic mean value within the limits of normal distribution.

The calculated χ-square test (2.43) indicates the representativeness of the sample on which the investigation was performed. The average weekly load of 1921 minutes is a mean value around which are concentrated all the other results with the dispersion of 310 which corresponds to the normal distribution. The average daily time load upon students of seventh grade is 387 minutes. The standard deviation and the tabular presentation of frequencies' dispersion (Tables 3 and 4) show that the students' time load in seventh grade

ranges within the limits of 2541 and 1301 minutes.

Table 3. Time load upon students in the representative week for seventh grade; Distribution of frequencies by days, given in minutes and hours

Time load				
Day	Minutes	Hours	f0	ft
1	836–1145	–	0	0.61
2	1146–1455	19:06–24:15	9	7.56
3	1456–1765	24:15–29:25	34	33.88
4	1766–2075	29:25–35:00	55	55.83
5	2076–2385	34:36–39:45	36	33.88
6	2386–2695	39:45–44:55	6	7.56
7	2696–3005	–	0	0.61

X=1921   σ=310
i=σ=310 χ^2=2.43

Table 4. Results (X and σ) by the success

	Success		
Results	5	4	3
X	2108	2007	1782
σ	256	257	225

Regarding the students from seventh grade classes we obtained average daily time load of 387 minutes, which is above the prescribed limit of 330 minutes. If we compare the theoretic optimal time of 330 minutes with the average time load by the success, we can make the conclusion that only the students achieving satisfactory success, i.e. with pass marks, are slightly less burdened (323 minutes) than the allowed by the theoretic time load norms.

3.3. Time load upon students in eighth grade

From the results obtained about the time load of the students from eighth grade classes, we can see that the frequency distribution of students' load is drawn according to the lower results (Tables 5 and 6). However, these deviations are not sufficient for obtaining some

significant difference regarding normal distribution of frequency.

Table 5. Time load upon students in the representative week for eighth grade; Distribution of frequencies by days, given in minutes and hours

Time load				
Day	Minutes	Hours	f0	ft
1	1011–1292	–	0	0.61
2	1293–1574	21:33–26:14	6	7.56
3	1575–1856	26:14–30:56	44	33.88
4	1857–2138	30:56–35:38	41	55.83
5	2139–2420	35:38–40:20	39	33.88
6	2421–2702	40:20–45:02	10	7.56
7	2703–2984	–	0	1

X=1998.1   σ=281.75
i=σ=281.75 χ^2=9.88

The average daily time load of 387 minutes is above the theoretically prescribed limit of 360 minutes. Viewed by the success, only those students who achieve satisfactory success, i.e. with pass marks, are burdened slightly less (346 minutes) than the optimal limit, while the time load of all the other categories of students is below the prescribed theoretic norm.

Table 6. Results (X and σ) by the success

	Success			
Results	5	4	3	2
X	2280	2136	1842	1728
σ	194	166	193	169

3.4. Time load upon students in ninth grade

Regarding the results on students' time load from ninth grade classes, most evident is the fact that these students in their work spend the biggest amount of time in the effort to respond to the tasks posed by the school.

The dispersion value obtained is the biggest compared to those obtained for the other grades (sixth, seventh and eighth), thus indicating big differences in the load between

individual students in ninth grade (Tables 7 and 8).

A very important characteristic of the load in ninth grade classes is the big difference in the load between individual students from the same category (for example, between the students achieving excellent success or between those achieving satisfactory success).

Table 7. Time load upon students in the representative week for ninth grade; Distribution of frequencies by days, given in minutes and hours

	Time load			
Day	Minutes	Hours	f0	ft
1	974–1085	–	0	0.61
2	1086–1459	18:06–24:14	3	7.56
3	1460–1833	24:14–30:13	44	33.88
4	1834–2207	30:33–36:47	55	55.83
5	2208–2581	36:47–43:00	28	33.88
6	2582–2955	43:00–49:15	10	7.56
7	2956–3325	–	0	1

$X=2021.3$ $\sigma=373.76$
$i=\sigma=374$ $\chi^2=9.55$

Table 8. Results (X and σ) by the success

	Success			
Results	5	4	3	2
X	2315	2136	1842	1710
σ	400	166	193	277

This phenomenon can be explained with the efforts of ninth grade students for achieving as better as possible success because of the requirements imposed by the high schools for enrollment. Therefore, during the final stages of primary education, a number of students invest maximum efforts for achieving as better as possible success which way their burden increases considerably if in the process the students don't possess the other components necessary for successful studying (developed intellectual abilities, good foreknowledge, good learning skills, etc.).

The calculated χ-square test (9.55) shows that the distribution between the obtained and the expected frequencies considerably differs.

4. ANALYSIS OF RESULTS AND DISCUSSION

The analysis of time load upon students by particular grades has shown that, in general, the obtained distribution of frequencies according to the statistic criterions is within the normal curve. Such results indicate the representativeness of the arithmetic mean values by grades, the methodological justification of the selection of a representative week for calculating the parameters needed, and especially the possibility for using these results as norms for valuating students' load in particular grades.

That's why we compared the obtained data on time load of the students covered in our sample with the theoretically given norms for the optimal load upon students of particular ages.

5. CONCLUSION

Using rational comparison with the norms proposed by Lairda we found the factual condition of students' time load in our primary schools which indicates that the average time load obtained in our measurements is above the optimal limit proposed, therewith ascertaining a state of overload. This state increases the efforts invested the students invest in their work, and is denoted as a negative phenomenon. Overloaded students suffer noxious consequences in their psychophysical, intellectual, moral, emotional and social development. That's why this complex pedagogical phenomenon must be held in the focus and studied further.

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Conflict of interests
The authors declare no conflict of interest.

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SUICIDAL THOUGHTS AS COGNITIVE RISK FACTORS FOR SUICIDE AMONG CANCER PATIENTS

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A R T I C L E   I N F O

A B S T R A C T

The aim of this study is twofold. The first aim is to investigate whether we can use the Patient Health Questionnaire-9 (PHQ-9), translated on Macedonian language, item 9 in order to screen passive suicidal thoughts. The second aim is to describe the nature of „better to be death thoughts or hurting own self in some way" reported with structure clinical interviews carried out in order to further asses passive suicidal thoughts of cancer patients, who hade endorsed item 9 of this scale. The data were collected from Department of maxillofacial surgery, Clinical Hospital, Stip, Macedonia, during the period june 2014 - june 2016. The final survey sample consists of 122 patients (66 % female and 34% male) aged 19-70 years. Inclusive criteria: patients were diagnosed with cancer in maxillofacial region. We applied Patient Health Questionnaire-9 (PHQ-9) and structured clinical interview. Two weeks after they become familiar with the diagnose they filled up PHQ-9 scale, and after four weeks clinical interviews were carried out. The reliability (Cronbach`s alpha) for the PHQ-9 scale translated on Macedonian language and sample was good (alpha > 0.85). We found that patients with diagnosed cancer who endorsed „passive suicide ideas item 9" were more likely to have suicidal thoughts which were described latter on during clinical interview. We analyzed thoughts reported by patients in the frame of modified categories of suicidality. Of 67 (54.92%) of patients who endorsed item 9 with „yes", the highest percentige was in category with passive suicidal thoughts 39 (58.21%). Due to the limitation of this study, more studies are needed in future.

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1. INTRODUCTION

Despite serious concerns about the risk of suicide among patients diagnosed with cancer in clinical practice, the analysis of literature and previous studies worldwide shows that there are only few studies that treat this issue (Akechi,Okamura, Nishiwaki, & Uchitomi, 2002; Misono, Weiss, Fann, Redman, & Yueh, 2008; Walker, Hansen, Buthcher, Sharma, Wall, Murray, & Sharpe, 2011; Robson, Scrutton, Wilkinson, & MacLeod, 2010). One of the basic tenets of the cognitive behavioral model of suicide explanation from which we start, is that having suicidal thoughts lead to action, then better conceptual understanding of suicidal ideas can offer clarification on how an individual will act (or not) according to these ideas. Screening of clinically relevant risk factors for suicide and identifying specific differences between passive and active suicidal ideation allow clinicians to identify the group of individuals at risk of suicide, to offer appropriate prevention and effective treatment.

In recent years, researchers and clinicians do not treat passive suicidal thoughts as

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clinically relevant risk factor for suicide, while underestimating the strength of this desire to die, compared with making a plan for suicide in individuals having active suicidal ideation. Identification of passive suicidal thoughts as a clinical relevant risk factor contributes to shedding light on the etiological picture of clinical depression and suicide phenomena among cancer patients. Passive suicidal ideation can be characterized as emotionally colored thoughts, more as a wish, according to which life is not worth living or that it is better for the person to be dead (Moran, 2013). One third of individuals with suicidal attempts in the past had passive suicidal ideation, or had plans for committing suicide (Baca-Garcia, Perez-Rodriguez, Oquendo, Keyes, Hasin, Grant, & Blanco, 2011; Moran, 2013).

The aim of this study is twofold. The first aim is to investigate whether we can use the Patient Health Questionnaire-9 (PHQ-9, Kroenke, Spitzer, & Williams, 2001), translated on Macedonian language, item 9 in order to screen passive suicidal thoughts. The second aim is to describe the nature of „better to be death thoughts or hurting own self in some way" reported with structure clinical interviews carried out in order to further asses passive suicidal thoughts of participants, cancer patients, who hade endorsed item 9 of this scale.

2. MATERIALS AND METHODS

In the frame of the „Goce Delcev" University, Stip, supported project, the data were collected from Department of maxillofacial surgery, Clinical Hospital, Stip, Macedonia, during the period June 2014 - June 2016. The study was approved by the Ethics Committee of the Goce Delcev" University, Stip.

The final survey sample consisted of 122 patients (66 % female and 34% male) aged 19-70 years. Inclusive criteria: patients were diagnosed with cancer in maxillofacial region. We applied Patient Health Questionnaire-9 (PHQ-9, Kroenke, Spitzer, & Williams, 2001), translated on Macedonian language and structured clinical interview. The Patient Health Questionnaire-9 (PHQ-9), is a well known a self report scale comprised of nine items developed to measure depression. For each item the patients are asked to asses how much they were bothered by the symptoms over the last two weeks. Each of the nine items is scored from zero to three, which results in a maximum summed score of 27, indicated the de-

gree of depression. Item 9 asks, „Over the last two weeks how often have you been bothered by the following problem: thoughts that you would be better off dead, or of hurting yourself in some way"? (Kroenke, Spitzer, & Williams, 2001). There are four answer options: „not at all" (scoring zero), „several days" (scoring one), „more than half the days" (scoring two) or „nearly every day" (scoring three).

Those patients who reported such thoughts for at least several days in that given period were labeled positive responders. Two weeks after they become familiar with the diagnose they filled up PHQ-9 scale, and after four weeks clinical interviews were carried out. Written informed consent was obtained by all study participants.

3. RESULTS

First of all we checked the reliability (Cronbach`s alpha) for the PHQ-9 scale translated on Macedonian language and sample. The reliability coefficient was good (alpha> 0.85). Than we applied PHQ-9 scale. Overall, 67 (54.92%) of 122 of patients with diagnosed cancer in maxillofacial region were positive responders to Item 9 of the PHQ-9, which indicated that they had thoughts that they would be better off dead or thoughts of hurting themselves for at least several days in the preceding 2 weeks. We found that patients with diagnosed cancer who endorsed „passive suicide ideas item 9" were more likely to have suicidal thoughts which were described later during structured clinical interview.

Based on written notes from a structured clinical interview conducted with each patient, based on consensus, the authors of this research placed each patient's response in the proposed categories. We analyzed thoughts reported by patients in the frame of modified categories of suicidality based on Walker`s research (Walker, Hansen, Buthcher, Sharma, Wall, Murray, & Sharpe, 2011). It is about six clinically significant categories for which consensus was reached between the authors of the paper (Table 1). The next step was to calculate the number and proportion of patients in each of the categories. Table 1 shows the number and percentage of patients placed in each categories of suicidality. Table 2 shows examples responses at interview.

Table 1. Categories of Reported Thoughts of Death and Suicide over preceding 4 weeks as elicited at interview and the number (%) of patients reporting each.

	Category	Number (%) patients, positive responders on item 9
A	Denied thoughts of death or suicide	6 (8.95 %)
B	Reported recurrent thoughts or worries about dying	15 (22.39 %)
C	Reported thoughts of being better off dead or of hurting themselves but no thoughts of suicide	**39 (58.21%)**
D	Reported thoughts of suicide but had not seriously considered a method or made a plan	4 (5.97 %)
E	Reported having seriously considered methods of suicide or had made a plan to end their life	2 (2.98 %)
F	Reported a suicide attempt	1(1.49 %)

Note: Category and description were based on Walker et al. (2011).

Table 2. Examples responses at interview

Category	Examples responses
A	„As before, I will deal with the situation in which I found myself"
B	"Oh God, this is not happening to me. I'm scared, is this all I have left of life ?"
C	„I really think I'd be better off dead than to die in awful pain and with decomposed face. What is the meaning of this life? "
D	„Hell, is approaching ... I feel it .... the best for everyone and for me - to go to sleep and not wake up ever again "
E	„If only someone would advise me exactly how to do it, with pills or with a razor. If my pain intensifies, I will probably do it "
F	„Very simple, I took an overdose of pills, and I don't regret it "

4. DISCUSSIONS

The analysis of the results obtained showed that 8.95% of positive respondents on item 9, denied any thoughts that they would be better off dead (category A) and 22.39 % reported recurrent thoughts or worries about dying (category B).

Of 67 (54.92%) of patients who endorsed item 9 with „yes", the highest percentige was in category with passive suicidal thoughts 58.21%. With other words, the greatest percentage of positive respondents is precisely in category C. They conveyed their thoughts that they would be better off dead, but not that they tried it or committed suicide. 5.97 % of respondents (D) are without a specific plan or method, but with the presence of thoughts of suicide. The remaining 2.98 % and 1.49 % of positive responders (category E and F, respectively) reported serious and clear thoughts of committing suicide.

We made a comparison of the data obtained with those from Walker's research (2011), which was the starting base for conducting our research. There are differences in the proportion of respondents in the categories, as well as similarities in terms of the detailed description of the thoughts about death and suicide and the finding that patients with a higher score of item- 9 are more inclined to have and communicate suicidal thoughts.

To our knowledge, in the Republic of Macedonia such a research among cancer patients in maxillofacial region has not been conducted so far. The research has three limitations. The first relates to the generalizing of the findings. The survey was conducted in one clinic only and with patients diagnosed with cancer in maxillofacial region, and therefore we cannot make conclusions about findings typical of patients with other diagnosed cancers. The second limitation relates to the application of selfreporting tests (PHQ-9) and structured clinical interview, which rely solely on the patient. The third limitation concerns the fact that many other important variables should be included in this kind of research, such as the patients' general health and their social support.

5. CONCLUSIONS

We can conclude that patients with serious diseases such as cancer are at higher risk of suicide (Misono, Weiss, Fann, Redman, & Yueh, 2008; Robson, Scrutton, Wilkinson, & MacLeod, 2010).The interpretation and comparison of findings of such studies is complicated because patients suffering from diseases that threaten their life are more preoccupied with thoughts of death than of suicide. We responded to the first objective of the research

- that we can use the PHQ-9 for screening passive suicidal ideation, but an obligatory and clinical interview is necessary in order to know which patients are at risk of suicide. We also achieved the second objective set in the research, and that is the answer to the question what patients actually think when they respond positively to item 9.

Methodological difficulties and the small number of conducted surveys make it difficult to identify risk factors and causes of suicide among cancer patients. Although significant progress in improving the quality of life of cancer patients has been made in the world, this research tells us that a significant number of patients communicate thoughts of being better off dead or thoughts of hurting themselves. These are alarming findings that oblige us to conduct further research.

There is a need of multidisciplinary work and teams between maxillofacial surgeons, clinical psychologist, psychiatrist and oncologist. We consider the follow up studies and the involvement of more important variables in research to be of great importance for determining the predictive risk factors for suicide among patients with cancer. We believe that this research has applicative value and that it has not only theoretical and empirical contributions, but has contributions to clinical practice as well because patients with severe medical illnesses such as cancer are at increased risk of suicide (Misono, Weiss, Fann, Redman, & Yueh, 2008).

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Conflict of interests

The authors declare no conflict of interest.

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JOHN DEWEY'S EDUCATIONAL THEORY AND EDUCATIONAL IMPLICATIONS OF HOWARD GARDNER'S MULTIPLE INTELLIGENCES THEORY

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ABSTRACT

Since 1983, when Howard Gardner published his theory of multiple intelligences, educators have begun to incorporate this new model into school programs. However, the idea of multimodal teaching is hardly a new concept. Many pioneers of modern education, such as: J. J. Rousseau, J.H. Pestalozzi, M. Montessory, J. Dewey, suggested educational models that oppose uniformity and predominantly verbal teaching. The aim of the research presented in this paper is to identify and compare compatible elements of educational ideas of John Dewey and Howard Gardner. The research is based on historical-comparative method and content analysis technique and is focused on exploring three key elements of intersection: curriculum, methods of teaching and learning, and teachers' role. Regarding the curriculum, both authors prefer integrated and thematic curriculum based on real-life context. They also agree on student-centred teaching where implementation of variety of active methods of learning will give opportunity to students to express their specific identity. Teacher's role in both concepts is to link students' personal experiences and characteristics to the material being studied and to the school life in general. The findings imply that educational implications of Gardner's theory can be considered as a continuation of Dewey's progressive vision of classroom teaching and school organization.

1. INTRODUCTION

The American scholars John Dewey and Howard Gardner, although living and working in different epochs, have built theories that initiated educational reforms in the school system in the Unites States and beyond. At the beginning of the 20th century John Dewey sharply criticised the traditional "old school", with a large number of passive students and with uniform curriculum and teaching methods, which center of gravity is in the teacher, in the textbook, anywhere and everywhere except in the immediate instincts and activities of the child himself (Dewey, 1915, p. 35). Based on these observations, he created an authentic comprehensive and coherent educational theory that marked the 20th century and dramatically shaped the educational reform process at elementary schools in the United States, but also in Europe and Asia. It promotes a child-centered approach in education, which is founded on several key principles (Dewey, 1915, 1966, 1974c):

- Education is a necessity of life, social process of continuing change and reconstruction of the individual experience; being interpreted within the concept of development, education is a process of living and not a preparation for future living.
- School is an embryonic form of

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community life and an instrument for social change and progress. That means that the school life grows out of all the aspects of the social life and that the child's experience develops in transaction with the community he lives in.

- Activity is the fundamental characteristic of the child's nature, which is expressed through his instincts, experience, interests and individuality. They represent a huge educational potential and starting point of the process of learning, but are not an end in itself: they need to be controlled and guided toward realization of predetermined goals.

Eight decades after Dewey had announced his educational theory, Gardner (1983) introduced the theory of multiple intelligences (MI), challenging the traditional concept of general intelligence as a single entity. On the basis of the neurological and cultural research, he described an individual's cognitive abilities in terms of seven relatively independent but interacting intelligences: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, intrapersonal and interpersonal. Later he added the eight, naturalist intelligence, and considered the possibility of including existential one as a ninth. The key points of the concept are: 1. each person possesses all intelligences, but they function together in ways unique to each person; 2. most people can develop each intelligence to an adequate level of competency; 3. intelligences usually work together in complex ways and 4. there are many ways to be intelligent within each category (Armstrong, 1994).

Gardner himself offered very few suggestions for educational use of the MI theory, since psychology does not directly dictate education but, "it merely helps one to understand the conditions within which education takes place" (Smith, 2002, 2008). However, it has had an intense impact on educational practice and during the late 80's a number of schools in North America have structured curricula according to its key principles. The theory inspired educators to question their work and encouraged them "to suggest approaches to curriculum, pedagogy, assessment, learning differences, use of computers, place of the arts—indeed, almost any issue in which educators are interested" (Gardner, 2011, p. 6). The experience of scholars and practitioners on implementation of MI ideas with various populations, age groups and educational settings was presented in the book Multiple Intelligences Around the World (2009). Of course, along with the good practices, a lot of misinterpretation occurred, that provoke the author to delineate the most common misunderstandings of his theory (Gardner, 1993, p. 68).

Although Gardner didn't create educational theory, he reflected on the different trends and contemporary status of the education in American society. In this context, he emphasized the need of changing the American education toward student-centred teaching: "American education is at a turning point. There are considerable pressures to move very sharply in the direction of "uniform schooling"; there is also the possibility that our educational system can embrace "individual centred schooling" (Gardner, 1993, p. 68). Gardner himself declared that much of his writings on education have been identified with educational tradition of Dewey and so called progressive or neo-progressive movement. He accepted his "alternative educational vision" which is "centred on understanding" so that "an individual understands the concept, skill, theory or domain of knowledge to the extent that he or she can apply it to a new situation" (Gardner, 1999, p. 118-119). In fact, Dewey and Gardner shared the same need for educational reform claiming that the established teaching methods at their times are neither correct nor beneficial for students. Also, both authors' ideas were subject to criticism and unenthusiastic responses along with the positive reactions.

2. MATERIALS AND METHODS

The review of the part of the literature written by Howard Gardner and other authors who overview his ideas and their educational implication, shows that on several occasions the relation between Dewey's and Gardner's thoughts on education has been pointed out. Unfortunately, either the elaboration on their common ideas is missing, or there are irreconcilable interpretations of Dewey's influence on Gardner. For example, Armstrong (1994) wrote that "MI theory is perhaps more accurately described as a philosophy of education, an attitude toward learning, or even a meta-model of education in the spirit of John Dewey's ideas...". Berube and Berube (2007, p. 21) declared that "Howard Gardner is another neo-progressive with links to John Dewey... Moreover, Gardner's definition of intelligence

is a variation of Dewey's."

The lack of analysis of the statements as those mentioned above was the incentive for the study aiming at:

• presenting J. Dewey's key ideas on education;

• presenting key points of implications of H. Gardner's MI theory in educational practice;

• identifying and comparing compatible elements of educational ideas of John Dewey and Howard Gardner.

The method used in the research is historical-comparative and it is carried out through content analysis of several books and scientific papers of both authors, as well as the part of the literature that comment their work. The analysis is focused on exploring three key elements of intersection of both authors' educational ideas: curriculum, methods of teaching and learning, and teachers' role. The material that is subject to analysis is presented in the list of references.

2.1. Dewey and Gardner's ideas: comparing key educational concepts

Curriculum
Dewey on Curriculum

Curriculum represents central issue in Dewey's school and key concept in his educational theory. If the starting point is the child who creates his experience in transaction with the surrounding environment, it is understandable why Dewey's concept of curriculum is different from the traditional one, which is perceived as a set of systematized information that is carefully packed in subjects and is independent from the child's experience. Hence, traditional school is separated from the real life and becomes "place for listening"; the knowledge becomes formal, static, and dead, while the child is treated as immature, superficial being with egoistic, impulsive and confused behaviour. Despite the fact that Dewey criticized traditional separation of the curriculum from child's experiential learning, he didn't reject the idea of systematized knowledge. The education should follow the path that leads from child's individual experience towards cumulative experience of the human kind. In this way, the child and the school curriculum build together the unity of the educational process.

Dewey pays great attention to the relationship between the child and the curriculum,

trying to overcome the separation between the two fundamental factors in the educational process, between "an immature, undeveloped being and certain social aims, meanings, values incarnate in the matured experience of the adult" (Dewey, 1974a, p. 339-340). This separation leads to three fundamental divergences and elements of conflict: the narrow but personal world of the child against the impersonal but infinitely extended world of space and time; the unity, the single wholeheartedness of the child's life, and the specializations and divisions of the curriculum; an abstract principle of logical classification and arrangement and the practical and emotional bonds of child life (Dewey, 1974a, p. 341-342). According to Dewey, these differences are the basis for developing two opposing educational systems: subject-centered and child-centered education. He strives to unify them, emphasising that there is no gap, but a transaction between the child and the subject matter, because they are simply two limits which define a single process: "Just as two points define a straight line, so the present standpoint of the child and the facts and truths of studies define instruction. It is continuous reconstruction, moving from the child's present experience out into that represented by the organized bodies of truth that we call studies" (Dewey, 1974a, p. 344). Hence, it is obvious that Dewey is not against the organized knowledge in textbooks and curriculum, but that it represents an aim of the learning process, the "final point" that should be reached. Human experience presented in books and textbooks is of great importance for the child, because it "gives direction; it facilitates control; it economizes effort, preventing useless wandering, and pointing out the paths which lead most quickly and most certainly to a desired result" (Dewey, 1974a, p. 350). However, the subject matter is not a substitute for a personal experience, for "an actual journey". It has meaning only if related to the existing experience, providing its stimulation and guidance. The absence of this characteristic, according to Dewey, causes many weaknesses of the traditional school.

When learning is based on experience, it is characterized by continuity and interaction. Unlike the old school where subjects are taught independently of each other in strictly defined time frames, Dewey stands for connection of subject content and flexible duration of classes, allowing the child to follow his interest in the process of learning. Basic skills such as reading and writing, in his opinion, should not be taught as formal subjects, but

should result from the child's need to master them in order to realize new goals. They represent instruments that every child learn how to use them, in his own pace in accordance with the individual motivation.

In the last years of the 19th century, Dewey observed that "the accumulation of knowledge has become so great that the educational system is disintegrating through the wedges of studies continually introduced" (Tanner, 1997, p.163). The answer to these conditions he finds in developmental curriculum: "All studies arise from aspects of the one earth and the one life lived upon it. We do not have a series of stratified earths, one of which is mathematical, another physical, another historical, and so on… Relate the school to life, and all studies are of necessity correlated" (Dewey, 1915, p. 80-81). Therefore, starting point for teachers in Dewey's school is undifferentiated curriculum that is followed by building conceptual knowledge from different subject arias. What provides the unity of the curriculum and its horizontal and vertical connection are occupations, which keep balance between intellectual and practical phase in the experience.

Gardner on curriculum

One central question in education is What is to be taught? Is it most important to focus on societal roles, cultural values or various forms of knowledge accumulated over the millennia? Each society value specific capacities and knowledge is encoded in variety of forms. Achieving an appropriate balance of "skilled performance, rich information and deep understanding" is a challenging matter (Gardner, 1991, p. 118). Gardner's interest in 'deep understanding', performance, exploration and creativity are not easily accommodated within an orientation to the 'delivery' of a detailed curriculum planned outside of the immediate educational context. He is convinced that superficial understandings of learners due to the fact that schools attempt to cover a large quantity of material. Instead, it is far more useful to spend more time on key concepts and essential questions and to allow students to become familiar with these notions and their implications.

The linking of students' education with the most up-to-date 'facts' about human intelligence, has great implications for the school setting. Gardner admits that "the idea of a number of relatively independent cognitive abilities is not in itself daunting. What is daunting

is the notion that one should therefore change one's pedagogy, curriculum, or means of assessment" (Phillips, 2010, p. 5). MI theory-based curriculum is student-centered, flexible (full of choices) and provide a setting for learning that is hand-on, interdisciplinary, based on real-life contexts, and set in an informal atmosphere that promotes free inquiry into novel materials and situations. Gardner (1999, p. 221) wrote: "Without apology, I confirm that I am a defender of the disciplines" but delivery of the traditional school subjects should be done in non-traditional ways, through project-centred instruction and extension of students' understanding of the topic by activities in the local community. Thematic and integrative instruction imitates life because it teaches students from an interdisciplinary point of view and provides them with opportunities to use their multiple intelligences in practical ways.

As a proponent of pluralistic approach, Gardner claims that nearly every topic can be approached in several ways: telling of a story, an artistic exploration, experiment or simulation. Since some individuals learn better through stories, others through artistic expression, or hands on activities or group work, each of these approaches activates a distinctive set of intelligences. Approaching a topic from a number of perspectives can be described as "multiple windows leading into the same room." The benefit of pluralization is that more learners will be able to understand something well, in ways that are comfortable for them and "not to leave any student out of the learning loop like the traditional schooling has done" (Phillips, 2010). Because the model is flexible, how it is applied in schools will vary depending on the beliefs and goals of educators. The author of the MI theory states that it is not a collection of rigid scripts that schools must enact in the same way in all settings, nor is it a simplistic cookbook for school improvement; "there are as many plausible recipes as there are educational chefs" (Achkovska Leshkovska, 2002, p. 101). However, Gardner (1995, p. 9) pointed out that he would appreciated school where "differences among youngsters are taken seriously, knowledge about differences is shared with children and parents, children gradually assume responsibility for their own learning, and materials that are worth knowing are presented in ways that afford each child the maximum opportunity to master those materials and to show others (and themselves) what they have learned and understood."

Dewey and Gardner on curriculum

On the basis of presented ideas of Dewey and Gardner on curriculum, it is possible to identify several common points of view. Both authors claim that the subject matters should provide links with real-life situations in order students' knowledge to be useful. The starting point of both authors is the child's nature and the need to adjust the curriculum to its individual features. While Dewey is focused on child's present experience and interests as embryos of capacities, Gardner put emphasis on distinctive cognitive profiles that are developed in early childhood and determine the most effective "entry points" for learning. Students' individual differences that are highlighted in Dewey's and Gardner's views, pave the way for flexible curriculum that is set up in an informal atmosphere. According to Dewey, the individualization of the curriculum is done through certain real-life occupations as forms of experiential learning and practical "learning-by-doing" activities. On the other hand, individualization within the educational implications of Gardner's MI theory is achieved through translation of the content into different "language" of each intelligence.

Another meeting point in Dewey's and Gardner's views is integrated curriculum. Gardner relates the implementation of this kind of curriculum to the child's need to get "an overall sense of the world", to integrate different channels of the own complex of intelligences, "for survival could not take place in the absence of some coherent versions of the world" (Gardner, 1991, p. 83). Close to this is Dewey's developmental curriculum that is undifferentiated, because it reflects the primitive unconscious unity of the social life of the child. Unlike Gardner who is not explicitly against division of knowledge in different subjects, Dewey argues that it is a violation of the child's nature if introducing the child too abruptly to a number of specific studies. The student's progress is not "in the succession of studies, but in the development of new attitudes towards, and new interest in, experience" (Dewey, 1974c, p. 434).

2.2. Learning and teaching methods

Dewey on learning and teaching methods

According to Dewey, the method is always in relation with the subject matter, it is not something outside of the material that needs to be studied. The method is "the effective direction of subject matter to desired results" (Dewey, 1966, p. 165), and the effectiveness implies processing of the content with maximum of savings in time and energy. This means that the method is primarily work of mind in dealing with experiential content: "The only method that has meaning is the method of the mind that achieves and assimilates" (Dewey, 1966, p. 127). Hence, when talking about method, Dewey puts emphasis not so much on teaching methods, but on methods of learning and experiencing.

In the process of learning by experience, Dewey says, the starting point is a particular problem situation, because the problem itself is the provocative element in the experience that calls upon the mind and puts it into operation. Having in mind that the development depends on the exposure to difficulties that should be overcome through the engagement of mind (Dewey, 1966b, p. 79), Dewey believes that the key method in the process of learning is problem solving. Problem situations should be connected to actual child experience and within the child's abilities for their resolution. Since earliest ages, children work on projects, individually or in groups, in school laboratories that enables them to develop their intelligence and manipulative skills. The aim of such an activity is not to give students analytical knowledge about the subject, but to stimulate their curiosity and research spirit (process oriented instead of content-oriented). Hence, learning methods should be active and inquiry based and the accumulation of information and principles must be subordinated to the development of intellectual self-control and ability to identify and solve problems.

Experience is the link between the method and the curriculum, between the action and the object upon which it is acted. It is not only a simple combination of mind and world, of method and content, but it is "a single continuous interaction of a great diversity of energies" (Dewey, 1966, p. 167). Isolation of the method and the content, according to Dewey, leads to several anomalies in the school educational process. Considering the fact that the students have very few opportunities for experiential learning, methods that teachers use are not an expression of their own "intelligent observations," but are "authoritatively recommended" and are characterized by "a mechanical uniformity " (Dewey, 1966, p. 168). This means that the method becomes a cut and dried routine of following prescribed steps, rather than

a creative act and a result of an individual experimentation.

Teaching method, says Dewey, is the method of an art, of action intelligently directed by ends (Dewey, 1966, p. 170). As every artist should be thoroughly acquainted with materials and tools with which he works, so the teacher must be in possess of the methods used by others, which experience has shown to be more efficient in the process of acquiring knowledge. However, knowing or owning these, as Dewey calls them, general methods, is not in opposition to the individual initiative and creativity of the teacher. If they are acquired as intellectual aids in sizing up the needs, resources, and difficulties within the framework of his experience, they are of constructive value (Dewey, 1966, p. 172). At the same time, the method is a result of the individual's specificity and could be understand as various individual methods. They reflect the individual approach to the problem, as well as different abilities, past experiences and interests. Dewey believes that there are several attitudes that are central in the process of intellectual dealing with subject matter: directness or straightforwardness with which one goes at what he has to do, flexible intellectual interest or openness of mind for learning, intellectual integrity, honesty and sincerity, as well as undertaking responsibility for the consequences of the act (Dewey, 1966, p. 173-179).

In Dewey's educational theory, the issue of method is primarily an issue of development of child's powers and interests. It means that the teacher should know well each child's development and follow his interests which are understood as "dawning capacities" (Dewey, 1974c, p. 436). In fact, the method and the way the content will be processed, is to be found in the child's own nature. Thus, considering the fact that the active side precedes the passive in the development of the child's nature ("expression comes before conscious impression; the muscular development precedes the sensory; movements come before conscious sensations ..." (Dewey, 1974c, p. 435), it is necessary to create conditions in the process of education that will allow the child to express its nature regarding the content, as well as the methods of learning and teaching.

Gardner on learning and teaching methods

One of the basic principal in MI theory is that human beings differ from one another and each person possesses all eight intelligences, but they function together in ways unique to each person. Children begin to show inclinations in specific intelligences from an early age and by the time they enter the school, they have already established ways of learning that are in line with their preferred intelligences. Each intelligence has its own unique symbol or notational system: phonetic, idegraphic, musical notational system etc. Therefore, there is absolutely no reason to teach and assess all individuals in the identical way.

According to Gardner (2011), the most important educational implications of MI theory are individuation and pluralization. Noting that the traditional classrooms stimulate dominantly linguistic and logical-mathematical abilities, Gardner emphasizes the need to expand teachers' repertoire of strategies with ones that nurture each intelligence. Students think and learn in many different ways. Using different methodologies, exercises and activities, teachers will meet needs of all students, not just those who excel at linguistic and logical intelligence. The broad range of techniques provides each student, from time to time, to have opportunity to learn in a way that works best for him/her. However, selection of appropriate methods should be based on solid criteria and critical inquiry on the part of the teacher.

Gardner (2011, p. 6) suggested that "in the future, good practice should particularize the modes of presentation as well as the manner of assessment as much as feasible; and that individuation should be based on our understanding of the intellectual profiles of individual learners." Gardner recognizes that it is hard to implement individualization in classroom with large number of students, but in a modern era a learner-centered curriculum is more readily attained because of the availability of computer technology in education settings. Schools can deliberately collect and make available resources- human and technological -that fit comfortably with the disparate learning style and cultural background of each student. (Gardner, 1991, p. 244).

Gardner himself didn't come up with a set of teaching strategies that promote MI philosophy. Rather, the theory offers educators a broad opportunity to creatively adapt its fundamental principles to different educational settings. Some of the teaching techniques have been used for decades by good teachers, the other ones are invented by the teachers themselves. For example, Armstrong (2009) elaborates forty teaching strategies, five for each of the eight intelligences that are designed to

be general enough to be applied at any grade level.

Dewey and Gardner on learning and teaching methods

Both authors share same understanding of methods of learning and teaching as tools for development of child's strengths and interests. The method is implicit within the child's own nature, hence it is necessary for the teacher to use a variety of methods that are complementary to the topic and to the student's specific cognitive style and identity. They also agree that learning should not be primarily oriented on products, but on process, and therefore, teachers should use methods that provoke student's higher order thinking instead of mere memorizing the facts.

Unlike Dewey who elaborates the issue of method on a solid theoretical basis, making distinction between general and specific methods and focusing on problem solving situations in the process of learning, Gardner offers only general guidelines that enable teachers to create a vast range of techniques that encourage development of different intelligences. His starting point is that traditional teaching gives priority to methods that stimulate linguistic and mathematical-logical intelligences, and the result is that many students fail to exhibit their strengths in other domains.

2.3. Teacher's role

Dewey on teacher's role

The role of the teacher in Dewey's educational theory is defined within the framework of its understandings of experience and development. The value of the systematized and defined experience of the adult mind, as Dewey points out in his book "The child and the curriculum", is in interpreting the child's life as it immediately shows itself, and in passing on to guidance or direction (Dewey, 1974c, p. 345). Interpretation and guidance of the child are, in fact, the two crucial tasks of the teacher, which require his considerable efforts and engagement.

Teacher primarily needs to know and understand the characteristics of the childhood, but also the nature of each child as individual. To interpret the child's nature, according to Dewey, means to consider his strengths and weaknesses within the process of development and in connection with the dynamic character of the child's experience. Hence, it

is wrong approach of the teachers in the "the old" school, which consider the child as an immature being that needs to get rid of this negative trait as soon as possible, in order to move towards the mature adult. On the other side, equally dangerous according to Dewey, is the interpretation of the "new education" that the children's powers and interests are important as such and they should be cherished as they are. Education for Dewey is neither "putting in" as Herbart believes, nor "drawing out" as Froebel defines it. It should be a conscious and intentional activity, which gives direction to the child's activities (Miovska-Spaseva, 2005, p.76-80).

Understanding the child's nature within the framework of continuous development represents a basis for his guidance or directing. In order to be able to perform this role successfully, the teacher needs to make selection of those content and environmental impacts that will encourage child's development. He must know "wisely and thoroughly the race-expression which is embodied in that thing we call the Curriculum" (Dewey, 1974a, p. 358) and to organize it in a way that will help the child to develop his abilities and his experience. The task of the teacher, then, is to "psyhologize" subject matters, which means to translate them into immediate experience that is significant and familiar to children. Therefore, the teacher is not concerned with the subject matter as such, but with subject matter as a related factor in a total and growing experience (Dewey, 1974a, p. 352). Guidance is not external imposition, warns Dewey, it is freeing the life-process for its own most adequate fulfilment. But this does not mean that the child should be left entirely alone. Guidance also means selection of appropriate stimuli for instincts and impulses which it is desired to employ in the gaining of new experience (Dewey, 1974a, p. 348-349). So, the intervention and the control of the teacher is an integral part of the educational work, and his experience and maturity are essential in providing normal conditions for the child's development.

The role of the teacher to stimulate student's learning by experiencing brings a different conception of discipline. It is not identified with drill, which aim is uniform external modes of action, but it is understood as a power of control of the means necessary to achieve ends and to value and test them (Dewey, 1974d, p. 255). Hence, the discipline is not imposed by the teacher, but derives from student's learning and his need to control the process of attaining of desired goals.

There is no doubt that in Dewey's theory teacher is indispensable figure in the process of education as the one who guide and nurture student's development by providing link between the subject matter and the student's developing experience. Realization of this task depends on teacher's abilities and efforts to adjust the school life to the intellectual and personal characteristics of each student, and to represent an "intelligent medium of action" (Dewey, 1974b, p. 205) who will be in possess of a sound knowledge of ethical and psychological principals, native tact and sympathy, and experience.

Gardner on teachers' role

Howard Gardner (1991) makes difference between two alternative ways of transmiting knowledge to the students. The main characteristic of the first one, so called "mimetic" education, is that students duplicated the desired behavior demonstrated by the teacher. This approach is focused on mastery of three Rs, and emphasizes basic skills and factual knowledge. The second approach is "transformative", where teacher serves as a facilitator, trying to evoke students' understandings. Students are encouraged to understand information, to solve problems and to work out their own ideas. This approach is oriented on individual invention of knowledge, transformation of past knowledge and on creative exploration. It is obvious that creativity approach is closer to Gardner' understanding of effective teaching, but he reflects on possibility to combine elements of both manners of transmiting knowledge. "One could value basic skills and yet seek to inculcate them through transformative methods- for example by having children learn to write by keeping their own journals or learn to compute by supervising their own little shopping centers." (Gardner, 1991, p. 120).

In accordance with the key points of the MI theory, teachers should approach topics through multiple entry points and plan time for students to engage in self-reflection, undertake self-paced work, interact in different ways or link their personal experience and feelings to the material being studied. They should continually shift methods from linguistic to musical, from spatial to bodily-kinesthetic, often combining intelligences in creative way. "Teachers seeking to utilize multiple intelligences theory in their classrooms must determine their students' strengths, weaknesses, and their combination of intelligences in order to provide meaningful learning experiences for them. The challenge is to figure out what these combinations are and how to best engage them." (Philips, 2010). Thematic instruction is another approach that is related to MI theory. Gardner recognizes the importance of teaching students from an interdisciplinary point of view. Even the teacher-centered teaching can use MI principles in a variety of ways designed to stimulate all intelligences. "The teacher who teaches with rhythmic emphasis (musical), draws pictures on the board to illustrate points (spatial), makes dramatic gestures while talking (bodily-kinesthetic), asks questions that invite spirited interaction (interpersonal), and includes references to nature in her lectures (naturalist) is using MI principles within a traditional teacher-centered perspective." (Armstrong, 2009, p.57).

Dewey and Gardner on teachers' role

Both Gardner and Dewey criticize the traditional role of a teacher as a dominant person in the classroom who through lecturing gives students portions of information that they should memorize and reproduce when needed. According to their opinion, the role of the teacher is defined within their understanding of child's development and experience. They both stress the individual approach in the process of teaching which means that teacher should recognize potentials, needs and interests of each student. Having in mind that students are engaged in classroom activities which are compatible to their individual abilities and interests, both authors develop similar concept of discipline that goes beyond the traditional understanding of classroom as a silent and static learning environment. Although Gardner didn't reflect on discipline in more elaborated way, his standpoint regarding this issue is positioned within the framework of active methods of learning and teaching, and creating an informal and relaxed atmosphere in a classroom. In comparison to Gardner, Dewey develops a positive and constructive concept of discipline which is not related to the role of the teacher, but to the student's learning and experience: "Discipline is a product, an outcome, an achievement, not something applied from without. All genuine education terminates in discipline, but it proceeds by engaging the mind in activities worthwhile for their own sake" (Armstrong, 1994). In general, both authors strive for a classroom management that creates environment in which students are likely to be less confused,

frustrated or stressed out. As a result, teacher is not put in a position to invent behavioural "tricks" in order to provide optimal learning conditions.

3. CONCLUSION

The educational theory of the American philosopher and educator John Dewey and the theory of multiple intelligences of the American psychologist Howard Gardner are well known world-wide theories. They influenced the educational policy and practice in a variety of educational contexts in the time when were created and beyond. Both authors are strongly against the traditional way of teaching and learning and developed original concepts that initiated international movements that questioned the established school organization and instruction. This research is an attempt to compare some of the key points of their alternative educational models in order to identify compatible elements and intersections. It is focused on three fundamental aspects of the educational process: curriculum, learning and teaching methods and teacher's role. On the basis of the comparative analysis presented in the previous section, several conclusions can be derived.

- Both Gardner and Dewey criticize the teacher-centred and subject-centred classroom in which uniformed curriculum, passive methods of learning and traditional concept of discipline management were implemented.
- Both authors initiated educational reforms in the American school system and beyond.
- Both authors promote the idea that student should not be adjusted to demands of the school, but school should appreciate student's needs and potentials.
- Curriculum should be based on real life situations and related to the student's experience and nature.
- Instead of rigid and segmented curriculum, both strive for implementation of flexible and integrative curriculum.
- Instruction is process-oriented instead of content-oriented.
- Methods of learning and teaching should be individualized, active and inquiry-based aiming at developing students' higher order thinking.

- Teacher should create or adapt different teaching strategies that will be compatible to the students' individual differences and the material they study.
- Both authors stand up for positive and constructive concept of discipline and relaxed classroom atmosphere.

Conflict of interests

The authors declare no conflict of interest.

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